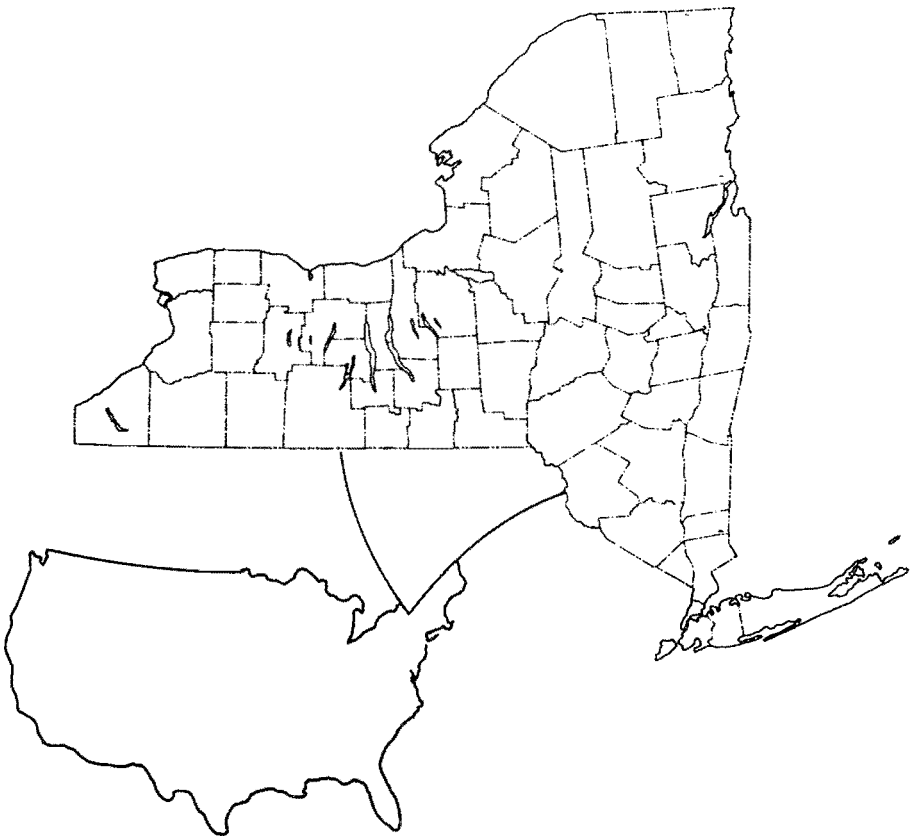
July 1985 A.E. Res. 85-15

DAIRY FARM MANAGEMENT

BUSINESS SUMMARY
New York
1984



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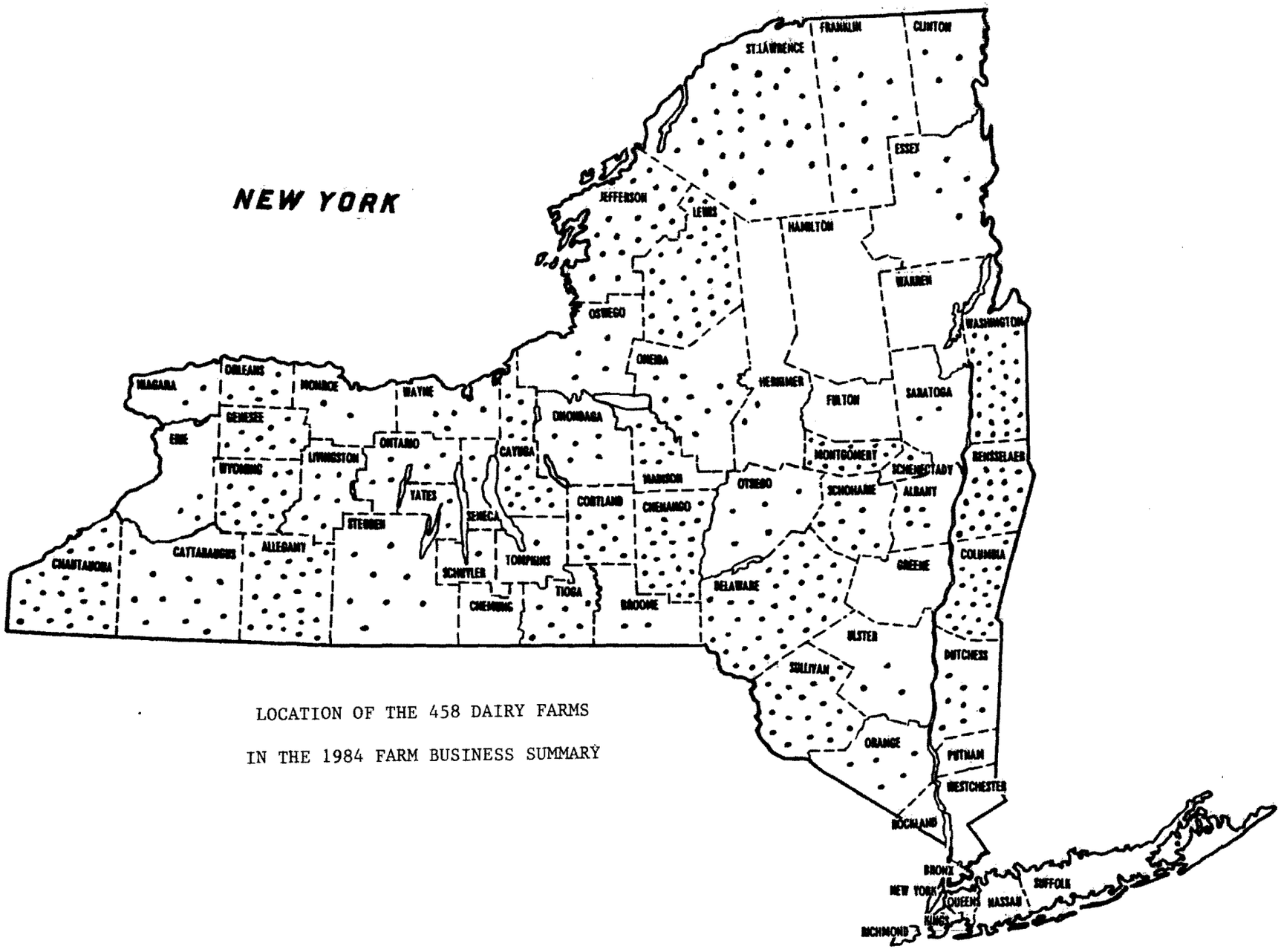


LOCATION OF THE 458 DAIRY FARMS

IN THE 1984 FARM BUSINESS SUMMARY

INTRODUCTION

Farm business management projects are an integral part of the agricultural extension program in New York State. The New York State College of Agriculture and Life Sciences at Cornell University, and the County Extension staffs, cooperate in sponsoring these projects. In 1984, more than 500 dairy farmers participated. The business records submitted by dairy farmers from 47 counties provide the basis for continued extension educational programs, data for applied research studies, and for use by students in the classroom.

Cooperative Extension agents and specialists enrolled the cooperators and collected the records. Regional summary reports were prepared by the college staff. Each cooperator received a summary and analysis of his or her business, and a regional report for making comparisons. These extension activities enable farmers to develop managerial skills and solve business management problems.

The records from all regions of the state have been combined and the results presented in this publication as an applied research study of the effects of changes in price, technology, and management on dairy farm incomes. This research provides current farm business information for use by dairy farmers, Cooperative Extension staff, teachers, and others concerned with the New York dairy industry.

A total of 458 farm business records are included in the main body of this report. These farms do NOT represent the "average" for all dairy farms in the State. Participation was on a voluntary basis, therefore, not all areas or types of operations were represented (see map on opposite page). The 458 farms represent a cross section of better than average commercial dairy farm owner-operators in the State. Fifty-six or 12 percent of the 458 farms were dairy diversion program participants in 1984. Dairy farm renters, dairy-cash crop farmers, and part-time dairy operators have been excluded from the main body of this report and summarized separately in the back of the publication. A three year comparison of dairy diversion program participants with nonparticipants is also included.

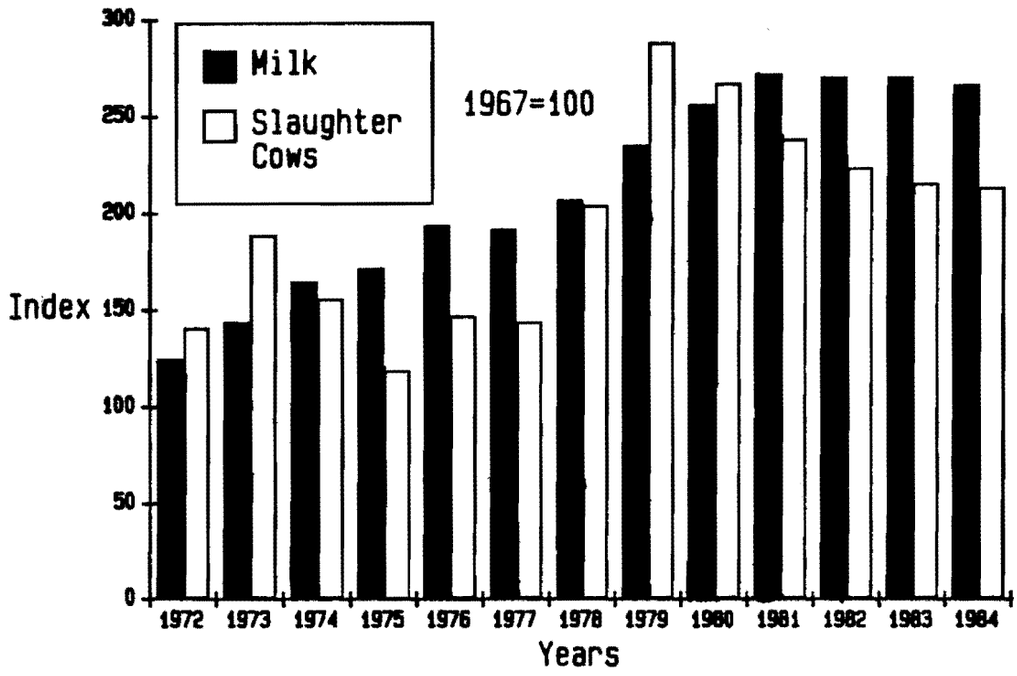
1984 Regional Summary Publications

Region	Publications	Author(s)
Western Plain Region	A.E. Ext. 85-7	Wayne A. Knoblauch & Linda D. Putnam
Eastern Plateau Region	A.E. Ext. 85-8	Stuart F. Smith & Linda D. Putnam
Southeastern New York	A.E. Ext. 85-9	Stuart F. Smith & Linda D. Putnam
Northern New York	A.E. Ext. 85-10	William F. Lazarus & Linda D. Putnam
Oneida-Mohawk Region	A.E. Ext. 85-11	Eddy L. LaDue
Central Plain Region	A.E. Ext. 85-12	Wayne A. Knoblauch & Linda D. Putnam
Western Plateau Region	A.E. Ext. 85-13	George L. Casler
Northern Hudson Region	A.E. Ext. 85-14	Stuart F. Smith & Cynthia W. Farrell
Columbia and Dutchess Counties	A.E. Ext. 85-15	Stuart F. Smith & Cynthia W. Farrell
Central New York	A.E. Ext. 85-16	Wayne A. Knoblauch & Linda D. Putnam

Acknowledgement

The preparation of this report and the processing and organization of the data it contains has been successfully completed by our dedicated support staff, Bev Carcelli, Mary Chaffee, and Cindy Farrell.

Chart 1. PRICES RECEIVED BY NEW YORK DAIRY FARMERS, 1972-1984



Source: NYCRS, New York Crop and Livestock Report.

The prices dairy farmers receive for milk and slaughter cows have a major impact on dairy farm profits. Milk prices increased steadily from 1972 to 1981. Small declines occurred in 1977, 1982, 1983, and 1984. Slaughter cow prices exhibited wide fluctuations over the period prior to 1979 not moving in the same direction for more than four consecutive years. Since 1979, prices for slaughter cows have been declining.

Table 1. PRICES RECEIVED BY NEW YORK DAIRY FARMERS, 1972-1984

Year	All Milk	Slaughter Cows	Monthly Farm Price of Milk, 1984	
	($/cwt)	($/cwt)	($/cwt)	
1972	6.33	24.50		
1973	7.32	32.80	January	13.60
1974	8.35	27.10	February	13.30
1975	8.71	20.60	March	13.10
			April	12.90
1976	9.83	25.40	May	12.70
1977	9.75	25.00	June	12.60
1978	10.50	35.30	July	13.10
1979	11.90	49.80	August	13.60
1980	13.00	46.30	September	14.10
			October	14.40
1981	13.80	41.30	November	14.60
1982	13.70	38.60	December	14.00
1983	13.70	37.20		
1984	13.50	36.90*		

*Preliminary
Source: NYCRS, New York Crop and Livestock Report.

Table 2. PRICES PAID BY NEW YORK FARMERS FOR SELECTED ITEMS, 1974-1984

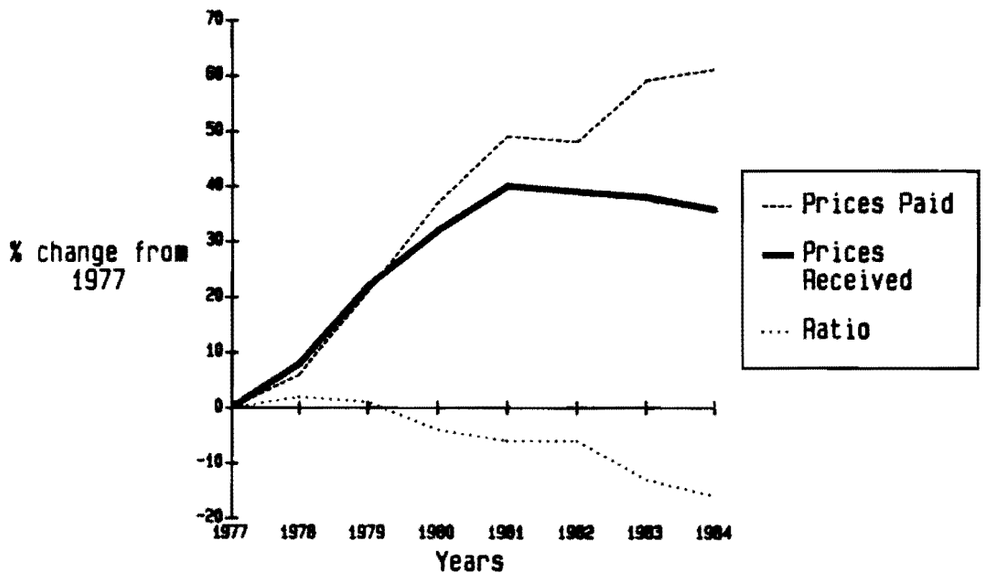
Year	Mixed Dairy Feed 16% Protein	Fertilizer, Urea, 45-46% N	Seed Corn, Hybrid	Diesel Fuel	Tractor 50-59 PTO	Electricity
	($/ton)	($/ton)	($/bu.)	($/gal.)	($)	($/mo.)
1974	138.20	215	25.00	0.374	7,780	37.80
1975	132.00	230	36.50	0.394	9,250	48.00
1976	139.00	180	36.50	0.420	9,400	56.10
1977	139.40	180	34.00	0.481	10,800	66.60
1978	136.50	189	39.00	0.509	11,300	68.40
1979	156.80	213	39.50	0.723	12,700	73.00
1980	179.60	259	49.00	1.030	13,200	100.00
1981	193.70	275	51.00	1.310	14,800	114.00
1982	176.60	278	61.00	1.240	16,200	126.00
1983	192.60	249	64.00	1.140	17,000	142.00
1984	194.25	250	68.00	1.140	17,800	152.00

Source: NYCRS, New York Agricultural Statistics.

The prices dairy farmers pay for a given quantity of goods and services has a major influence on farm production costs. The astute manager will keep close taps on unit costs and utilize the most economical goods and services.

Table 2 shows average prices of selected goods and services used on New York dairy farms. Chart 2 shows the ratio of prices received for milk and prices paid by New York dairy farmers as a percent change from 1977. The ratio has been on a downward trend since 1978, indicating a less favorable economic environment for dairy farmers.

Chart 2. RATIO OF PRICES RECEIVED FOR MILK AND PRICES PAID BY NEW YORK DAIRY FARMERS, 1977-1984



Source: NYCRS, New York Agricultural Statistics.

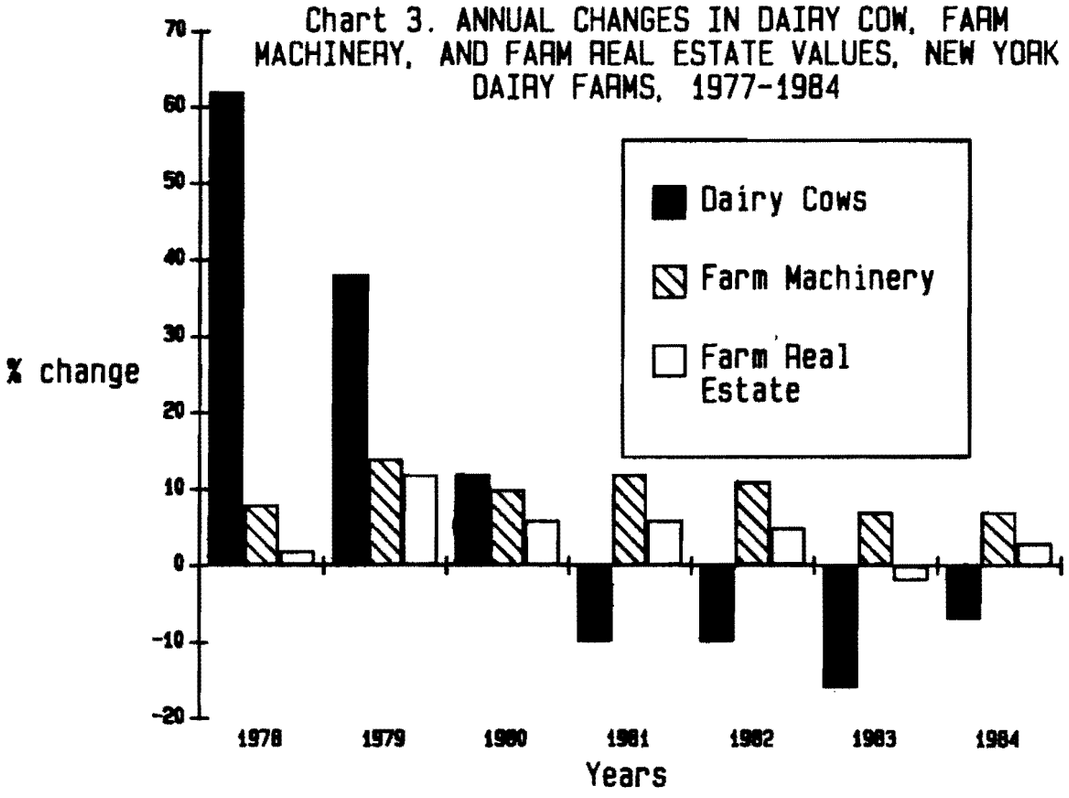
Inflation, appreciation, supply and demand all have a direct impact on the inventory values on New York dairy farms. Machinery prices have risen steadily during the past seven years. Dairy cow prices have changed most dramatically as the demand for replacements jumped in 1978 and 1979 but has declined rapidly since 1980. Real estate values increased three percent in 1984.

Table 3. UNIT VALUES OF NEW YORK DAIRY FARM INVENTORY ITEMS, 1977-1984

Year	Dairy Cows		Machinery	Farm Real Estate	
	Value/Head	1977=100	1977=100	Value/Acre	1977=100
1977	$ 495	100	100	$587	100
1978	800	162	108	600	102
1979	1,105	223	123	670	113
1980	1,240	251	135	708	119
1981	1,120	226	151	749	126
1982	1,010	204	167	786	132
1983	850	172	178	770	129
1984	790	160	190	793	133

Source: USDA, ERS, Farm Real Estate Market Developments Outlook & Situation.
NYCRS, New York Agricultural Statistics.

Table 3 shows New York year end (December) prices paid for dairy cows (replacements), an index of the same cow prices, an index of New York machinery prices, the average per acre value of New York farmland and buildings reported in April, and an index of the real estate prices.



Source: USDA, ERS, Farm Real Estate Market Developments Outlook and Situation.
NYCRS, New York Agricultural Statistics.

SUMMARY OF THE FARM BUSINESS

Business Characteristics and Resources Used

Recognition of important business characteristics and a knowledge of the farm resources is necessary for evaluating management performance. The combination of resources and management practices employed by a manager is known as farm organization. Important farm business characteristics, the number of farms reporting these characteristics, and the average labor and land resources used are presented in Table 4.

Table 4. BUSINESS CHARACTERISTICS AND RESOURCES USED
458 New York Dairy Farms, 1984

Type of Business	Number	Percent
Sole Proprietorship	329	72
Partnership	113	25
Corporation	15	3
Unclassified	1	<1
Barn Type		
Stanchion	272	59
Freestall	163	36
Other	23	5
Milking System		
Bucket & Carry	7	2
Dumping Station	66	14
Pipeline	220	48
Herringbone	142	31
Other Parlor	23	5

Labor Force	My Farm	Average
Operator	_____	16 mo.
Family	_____	5 mo.
Family unpaid	_____	3 mo.
Hired	_____	13 mo.
Total months	_____	37 mo.
Operators (608)		1.33
Age	_____	43 yrs.
Education	_____	13 yrs.
Estimated value labor & mgmt.	$_____	$15,992

Business Records	Number	Percent
Account Book	187	41
Agrifax	94	20
CAMIS	64	14
Agway	22	5
Farm Bureau	4	1
On-Farm Computer	13	3
Other	74	16
Dairy Records		
D.H.I.C.	329	72
Owner Sampler	56	12
Other	14	3
None	59	13

Land Used	My Farm	Average
Total acres:		
Owned	_____	338
Rented (382)	_____	139
Tillable acres:		
Rented (374)	_____	115
Total	_____	280
Number of Cows		
Beg. of year	_____	90
End of year	_____	92
Avg. for year	_____	89

The most typical dairy farm business was a sole proprietorship with stanchion barn, pipeline milking system, and DHIC records. There were 608 full-time operator equivalents on the 458 dairy farms for an average of 1.33 operators per farm. The operators averaged 43 years of age and 13 years of formal education.

All the 458 farm businesses included in the regular dairy summary own farm real estate. Dairy farm renters are summarized separately later in this publication. However, 374 of the dairy farm owners rented an average of 115 acres of tillable land in 1984. The 458 farms averaged 280 total tillable acres per farm of which 93 acres were rented.

Farm Inventory Values

Table 5. CAPITAL INVESTMENT - FARM INVENTORY VALUES
458 New York Dairy Farms, 1984

Item	My Farm 1/1/84	My Farm 1/1/85	Average 458 Farms 1/1/84	Average 458 Farms 1/1/85
Livestock	$_____	$_____	$118,212	$118,266
Feed and supplies	_____	_____	38,625	41,053
Machinery and equipment	_____	_____	94,431	97,284
Land and buildings	_____	_____	244,416	251,272
TOTAL	$_____	$_____	$495,684	$507,875

The value of total farm inventories increased an average of $12,191 per farm or 2.5 percent during 1984. This compares to an increase of one percent in 1983. From 1963 through 1982, farm inventory values increased at an average rate of nine percent.

The market value of livestock increased an average of only $54 per farm in 1984. The change in inventory caused by the decline in cattle prices averaged $-3,767 per farm. If there had been no herd growth during the year, the livestock inventory would have dropped an average of $3,767 per farm. Herd growth is calculated in Table 6.

Table 6. CHANGES IN LIVESTOCK INVENTORY
458 New York Dairy Farms, 1984

Item	Average 458 Farms	
End of year market value inventory	$118,266	
Beginning of year market value inventory	-118,212	
Total Increase in Inventory		$ 54
End of year market value inventory	$118,266	
End of year inventory at beginning prices	-122,033	
Change Due To Price (negative appreciation)		-(-)3,767
Change Due To Physical Growth in Inventory		$ 3,821

The increase in livestock inventory caused by growth and maturity of the herd averaged $3,821 per farm. Approximately 20 percent of this amount can be attributed to the increase in dairy cow numbers owned from 90 to 91 head per farm. A six percent increase in the size of the youngstock herd accounts for the majority of the inventory change.

Feed and supply inventories increased six percent during 1984 after jumping at an annual rate of 12 percent over the period 1978-83.

Machinery and equipment and land and building inventory changes are examined on the following pages.

Machinery and Real Estate Inventory Calculations

Capital outlays for machinery and buildings usually occur in large uneven amounts, but depreciate gradually over a period of time. Machinery depreciation is a charge for using the machinery complement in production and is based on the farmer's income tax depreciation. Appreciation is the change in machinery inventory caused by inflation. It is calculated as a residual in Table 7.

Table 7. CHANGES IN MACHINERY AND EQUIPMENT INVENTORY
458 New York Dairy Farms, 1984

Item		Average 458 Farms
End of year market value		$97,284
Beginning of year market value	$94,431	
Plus machinery purchased	+14,101	
Less machinery sold	- 484	
Less depreciation	-15,345	
Net End Investment		92,703
Appreciation		$ 4,581

The end of year market value of real estate is verified in Table 8 by starting with the beginning of year value, adjusting for purchases, sales, depreciation of buildings, and appreciation of land. Lost capital is the difference between the cost of new buildings and the amount these improvements added to the value of the farm. Lost capital is not included in farm expenses. Building depreciation is based on the full cost of new buildings and will account for lost capital over the life of the investments. Building depreciation is based on tax depreciation and is included as a farm expense. Real estate appreciation was estimated by each farm operator. It is the increase in value of real estate caused by demand and inflation.

Table 8. CHANGES IN REAL ESTATE INVENTORY
458 New York Dairy Farms, 1984

Item		Average 458 Farms	
End of year market value			$251,272
Beginning of year market value		$244,416	
Plus cost of new real estate	$+11,113		
Less lost capital	- 1,686		
Value Added		+ 9,427	
Less depreciation	- 7,308		
Less real estate sold	- 829		
Value Deducted		- 8,137	
Net End Investment			245,706
Appreciation			$ 5,566

Receipts

All the cash received for products sold plus the increases in livestock and feed and supply inventories are included in total farm receipts. Farm receipts have also been summed excluding inventory appreciation.

Table 9. FARM RECEIPTS
458 New York Dairy Farms, 1984

Item	My Farm	Average 458 Farms Per Farm	Per Cow	Percent
Milk sales	$_____	$185,226	$2,081	89
Crop sales	_____	2,141	24	1
Dairy cattle sold	_____	12,240	137	6
Other livestock sales	_____	2,736	31	1
Gas tax refunds	_____	193	2	<1
Government payments	_____	3,180	36	1
Custom machine work	_____	342	4	<1
Miscellaneous	_____	3,097	35	1
Total Cash Receipts	$_____	$209,155	$2,350	100
Increase in livestock inventory*	_____	3,821	43	
Increase in feed & supply inventory	_____	2,428	27	
Total Farm Receipts Excluding Appreciation	$_____	$215,404	$2,420	
Livestock appreciation	_____	- 3,767	- 42	
Machinery appreciation	_____	4,581	51	
Real estate appreciation	_____	5,566	63	
Total Farm Receipts	$_____	$221,784	$2,492	

*Increase attributed to growth and maturity of herd (page 6).

Participation by 56 of the 458 dairy farmers in the 1984 dairy diversion program had an impact on average farm receipts. Government payments are up $1,813 per farm compared with the 1983 all dairy farm average. Diversion payments earned in 1984 but received in 1985 were not included in 1984 cash receipts, but are reflected in the balance sheet as an account receivable.

Table 10. INCOME ANALYSIS
458 New York Dairy Farms, 1984

Item	My Farm	Average 458 Farms	Top 10%*
Average price per cwt. milk sold	$_____	$13.49	$13.40
Milk sales per cow	$_____	$2,081	$2,292
Milk and cattle sales per cow	$_____	$2,249	$2,467
Total cash receipts per worker	$_____	$67,907	$94,059

*Forty-six farms with the highest labor and management income per operator.

The average price received for milk sold (based on gross milk receipts) was $13.49 per hundredweight in 1984, $.15 above the 1983 average. Increases in dairy diversion assessments, hauling charges, and other milk marketing costs are reflected in higher milk marketing expenses on page 10.

The average or mean price per hundredweight of milk sold is calculated by dividing the gross milk receipts for the year by the total pounds of milk sold. The average price for the 458 farms was $13.49 but there was considerable variation among the individual farms. The variation in average price received and the distribution of farms around the mean is shown below.

VARIATION IN AVERAGE MILK PRICE

Average Price Received For Milk	Number of Farms	Percent of Farms
Below $12.50	11	2
$12.50 to 12.99	70	15
13.00 to 13.49	223	49
13.50 to 13.99	68	15
14.00 to 14.49	54	12
14.50 to 14.99	23	5
15.00 and over	9	2
Total	458	100

Sixty-four percent of the farms received from $13.00 to $13.99 per hundredweight of milk sold. Nineteen percent of the farms received $14.00 or more per hundredweight while 17 percent received less than $13.00 per hundredweight. Location and organization of markets are factors contributing to the variability of milk prices on these dairy farms. Management practices on farms as well as in milk companies also affect farm milk prices. Seasonality of production and butterfat test are two variables under the direct control of the farm manager.

Total farm receipts are sometimes used as a measure of size of business. The Census of Agriculture uses this measure in classifying farms. The distribution of total farm receipts of the 458 farms in 1984 is shown below.

DISTRIBUTION OF FARMS BY TOTAL FARM RECEIPTS

Total Farm Receipts	Farms	
	Number	Percent
Under $ 50,000	8	2
$ 50,000 to 99,999	69	15
100,000 to 149,999	110	24
150,000 to 199,999	100	22
200,000 to 249,999	54	12
250,000 to 299,999	29	6
300,000 to 349,999	19	4
350,000 to 399,999	18	4
400,000 and over	51	11
Total	458	100

Almost one-half of the 458 farms had total farm receipts of less than $150,000 but only two percent fell below $50,000. The remaining 271 farms had total receipts ranging from $150,000 to over $400,000 in 1984.

Expenses

Total cash farm expenses for the 458 farms averaged $465 per day or $5.22 per cow per day. Total farm expenses averaged more than $580 per day. The average expenses per farm and per cow for each item are shown below.

Table 11. FARM EXPENSES
458 New York Dairy Farms, 1984

Item	My Farm	Average 458 Farms Per Farm	Average 458 Farms Per Cow	Percent
Hired Labor	$_____	$ 19,114	$ 215	11
Feed				
Dairy grain & concentrate	_____	45,109	507	27
Hay & other feed	_____	2,383	27	1
Machinery				
Machine hire, rent, & lease	_____	1,514	17	1
Machinery repairs	_____	9,519	107	6
Auto expense (farm share)	_____	464	5	<1
Gas & oil	_____	6,903	78	4
Livestock				
Replacement livestock	_____	1,377	15	1
Breeding fees	_____	2,806	32	2
Veterinary & medicine	_____	3,944	44	2
Milk marketing	_____	14,148	159	8
Cattle lease	_____	98	1	<1
Other livestock expense	_____	7,487	84	4
Crops				
Fertilizer & lime	_____	9,045	102	5
Seeds & plants	_____	3,003	34	2
Spray & other crop expense	_____	2,719	31	2
Real Estate				
Land, building, fence repair	_____	2,537	28	2
Taxes	_____	4,495	50	3
Insurance	_____	2,799	31	2
Rent/lease	_____	3,603	40	2
Other				
Telephone (farm share)	_____	604	7	<1
Electricity (farm share)	_____	4,438	50	3
Interest paid	_____	19,170	215	11
Miscellaneous	_____	2,395	27	1
Total Cash Expenses	$_____	$169,674	$1,906	100
Expansion livestock	_____	1,668	19	
Machinery depreciation	_____	15,345	173	
Building depreciation	_____	7,308	82	
Unpaid labor	_____	1,635	18	
TOTAL FARM EXPENSES EXCLUDING INTEREST ON EQUITY CAPITAL	$_____	$195,630	$2,198	
Interest on equity capital @ 5%	_____	16,811	189	
TOTAL FARM EXPENSES	$_____	$212,441	$2,387	

The farm expense categories used in Table 11 on page 10 are nearly identical to those used to summarize New York dairy farms for many years. The following additions and revisions were implemented within the last two years.

The lease and rental fees dairy farms pay for machinery, dairy cattle, and farm structures are included as cash operating expenses. Farm machinery lease and rental fees are included in Machinery hire, rent and lease. Cattle lease, has been added under livestock expenses. Lease payments for farm buildings and structures fall under real estate Rent/lease.

Milk marketing costs include the federal milk assessment as well as coop dues, hauling, and advertising. They averaged $14,148 per farm in 1984, up $1,683 from the 1983 average on 510 dairy farms.

Interest on equity capital was changed to five percent in 1982. This real rate of interest represents the long term average rate of return that a farmer could expect to earn on investments with comparable risks to farming, in an economy with little or no inflation. Since labor and management income is now computed by excluding the effects of inflation on farm assets, the real rate of interest is used to determine the opportunity cost of using equity capital.

Following are explanations of other expense classifications.

Replacement livestock purchased are included as cash operating expenses which is consistent with including the costs of raising replacement cattle as cash operating expenses. The purchase of cattle that increase herd size are classified as expansion livestock and are included as capital expenses. The value added to the herd as a result of adding expansion livestock is included under increase in livestock inventory, Table 9, page 8.

Other livestock expenses include DHIA fees, bedding, milkhouse and stable supplies, registration and classification expenses.

Interest paid on farm indebtedness including open accounts is included as a cash expense in these summaries. Debt payments usually include both interest and principal but only the interest portion is included in the expenses. Principal payments are an investment not an operating expense of the business.

Machinery and real estate depreciation charges are shown on page 7. Expenditures for machinery and buildings are usually made in large amounts. To include all the expenses in the year of purchase would inappropriately increase the farm expenses for that year.

Unpaid family labor refers to work done by members of the family who are not paid cash wages. The operator's labor is not included. Unpaid family labor is charged to the business at $500 per month of full-time equivalent.

Changes in farm inventory values caused by fluctuations in market prices are categorized as livestock appreciation, machinery appreciation, and real estate appreciation in Table 9 on page 8. A substantial drop in price will cause depreciation and is accounted for as a negative appreciation value in Table 9. Therefore, both inflationary and deflationary price changes that affect the value of farm inventories are reflected in farm receipts.

Financial Summary of Year's Business

The financial summary of the year's business reflects the quality of management. Researchers have developed a number of ways to measure the returns from a farm business. Four common measures are reported here. The measure selected at any one time will depend on the purpose for which it is used.

Table 12. NET CASH FARM INCOME
458 New York Dairy Farms, 1984

Item	My Farm	Average 458 Farms	
		Per Farm	Per Cow
Cash Farm Receipts	$_____	$209,155	$2,350
Cash Farm Expenses	_____	169,674	1,906
NET CASH FARM INCOME	$_____	$ 39,481	$ 444

Net cash farm income is a measure of the cash available from the year's farm operations for family living, principal payments, and other uses. A family may have additional cash available if they have nonfarm income. Net cash income is not a good measure of farm business profits but it addresses the cash flow situation and is useful in planning debt repayment programs and family budgets.

Table 13. LABOR, MANAGEMENT, AND OWNERSHIP INCOME
458 New York Dairy Farms, 1984

Item	My Farm	Average 458 Farms	
		Per Farm	Per Cow
Total Farm Receipts	$_____	$221,784	$2,492
Total Farm Expenses Excluding Interest on Equity Capital	_____	195,630	2,198
LABOR, MANAGEMENT & OWNERSHIP INCOME PER FARM	$_____	$ 26,154	$ 294
Number of Operators	_____	1.31	1.31
LABOR, MANAGEMENT & OWNERSHIP INCOME PER OPERATOR	$_____	$ 19,965	$ 224

Labor, management, and ownership income per operator reflects the combined return to the farmer for his triple role of worker-manager, financier, and owner. This measure includes appreciation and interest on equity capital as returns to ownership. This measure of farm profit includes the operator's gain in net worth as well as net farm income. The average labor, management, and ownership income per operator was $19,965 in 1984.

Labor and management income measures the return the operator earns for his or her efforts in operating and managing the business. Return to ownership has been excluded by including a five percent charge for the use of equity capital in farm expenses, and excluding appreciation of farm inventories from farm receipts. Appreciation is included as a return to ownership in Table 13 on page 12.

Table 14. LABOR AND MANAGEMENT INCOME
458 New York Dairy Farms, 1984

Item	My Farm	Average 458 Farms Per Farm	Average 458 Farms Per Cow
Total Farm Receipts Excluding Appreciation	$_____	$215,404	$2,420
Total Farm Expenses	_____	212,441	2,387
LABOR & MANGEMENT INCOME	$_____	$ 2,963	$ 33
Number of operators per farm	_____	1.31	1.31
LABOR & MANAGEMENT INCOME PER OPERATOR	$_____	$ 2,262	$ 25

Labor and management income per operator averaged $2,262 on these 458 dairy farms in 1984. There were 608 full-time operators on the 458 farms for an average of 1.31 operators per farm.

The range in labor and management income per operator was from less than -$50,000 to more than $40,000. Returns to labor and management were negative on more than 45 percent of the farms. Labor and management income per operator ranged from $0 to $19,999 on 42 percent of the farms while only 10 percent showed labor and management incomes of $20,000 or more per operator.

DISTRIBUTION OF LABOR INCOMES PER OPERATOR

Labor Income Per Operator	Farms Number	Farms Percent
Less than -$50,000	7	2
-$50,000 to - 40,001	5	1
- 40,000 to - 30,001	16	3
- 30,000 to - 20,001	26	6
- 20,000 to - 10,001	52	11
- 10,000 to - 1	113	25
0 to 9,999	129	28
10,000 to 19,999	63	14
20,000 to 29,999	21	4
30,000 to 39,999	13	3
40,000 or more	13	3

Return on equity capital can be computed with or without appreciation. To calculate return on equity capital the estimated value of operator's labor and management is deducted from labor, management, and ownership income. The average estimate made by the 608 operators was $16,633 per operator. This is somewhat less than the value determined by using $750 per month for the labor plus a management fee based on five percent of the cash receipts per operator ($9,000 + $7,983 = $16,983). The value used in Table 15 is the operators' estimates times the number of operators per farm ($16,633 x 1.31 = $21,789).

Table 15. RETURN ON EQUITY CAPITAL
458 New York Dairy Farms, 1984

Item	My Farm	Average 458 Farms
	Including Appreciation	
Labor, Management, & Ownership Income (pg. 12)	$_____	$ 26,154
Value of Operator's Labor & Management (pg. 5)	_____	21,789
RETURN ON EQUITY CAPITAL	$_____	$ 4,365
Amount of Equity Capital	$_____	$336,210
RATE OF RETURN ON EQUITY CAPITAL	_____%	1.3%
	Excluding Appreciation	
Return on Equity Capital (from above)	$_____	$ $4,365
Less Appreciation	_____	6,380
RETURN ON EQUITY CAPITAL	$_____	$ -2,015
Amount of Equity Capital	$_____	$336,210
RATE OF RETURN ON EQUITY CAPITAL	_____%	-0.6%

The return to equity capital is divided by the farm net worth to determine the rate of return on equity capital. To compute return on equity capital without appreciation, appreciation is excluded from ownership income. The rate of return on all capital can be computed by adding interest paid to the return and dividing by total farm assets. It averaged 3.2 percent on these farms in 1984.

Returns Per Unit of Input

Income from a business can also be calculated in relation to various input units. For example, the labor and management return can be allocated to the entire labor force and figured on a per worker basis.

Returns To All Labor and Management	
Labor & management income per farm	$ 2,963
Cost of hired labor	19,114
Value of unpaid labor	+ 1,635
Total Returns to Labor & Management	$23,712
Average worker equivalent	3.08
Returns per worker equivalent	$ 7,699
Returns per hour (3,000 hours/worker/year)	$ 2.57

Farm and Farm Family Financial Situation

The financial situation is an important part of the farm business summary. It has a direct effect on current cash outflow and future capital investment decisions. A farmer may have a good labor income, but a high debt repayment schedule may seriously restrict management flexibility.

Table 16. FARM AND FARM FAMILY FINANCIAL SITUATION
458 New York Dairy Farms, January 1, 1985

Item	My Farm	Average 458 Farms Amount		Percent
Assets				
Livestock	$_____	$118,274		21
(includes discounted lease payments)		(8)		
Feed & supplies	_____	41,053		7
Machinery & equipment	_____	98,345		17
(includes discounted lease payments)		(1,061)		
Land & buildings	_____	252,913		45
(includes discounted lease payments)		(1,641)		
Co-op investment	_____	8,721		2
Accounts receivable	_____	17,087		3
Cash & checking accounts	_____	3,038		<1
Total Farm Assets	$_____		$539,431	95
Savings accounts	$_____	$ 3,909		1
Cash value life insurance	_____	2,800		<1
Stocks & bonds	_____	3,084		1
Nonfarm real estate	_____	5,884		1
Auto (personal share)	_____	1,863		<1
All other	_____	7,317		1
Total Nonfarm Assets	$_____		24,857	
TOTAL ASSETS	$_____		$564,288	100
Liabilities				
Long term	$_____	$115,051		57
Intermediate	_____	74,975		37
Financial lease	_____	2,710		1
Short term	_____	3,992		2
Other farm accounts	_____	6,493		3
Total Farm Liabilities	$_____		$203,221	100
Nonfarm Liabilities	_____		882	
TOTAL LIABILITIES	$_____		$204,103	
Farm Net Worth (equity capital)	$_____		$336,210	
Family Net Worth	$_____		$360,185	

Total farm assets accounted for 95 percent of the total assets. Long term loans were the largest liability and accounted for 57 percent of all debts. Intermediate debt accounted for 37 percent of all liabilities.

The ability to service debt is the most important consideration in determining if and how proposed investments can be financed. Debt payment capacity based on 1984 income is compared with 1985 scheduled debt payments in Table 17.

Table 17. DEBT PAYMENT CAPACITY AND SCHEDULED COMMITMENTS
458 New York Dairy Farms, January 1, 1985

Item	My Farm	Average 458 Farms	
		Per Farm	Per Cow[1]
Net cash farm income	$_____	$39,481	$429
Interest paid	_____	19,170	208
Off-farm income	_____	2,033	22
CASH AVAILABLE FOR DEBT PAYMENTS AND LIVING		$60,684	$659
Estimated family living expense[2]	_____	22,645	246
CASH AVAILABLE FOR DEBT PAYMENTS AND CAPITAL PURCHASES	$_____	$38,039	$413
Debt payments planned	$_____	$45,047	$490
Debt payments planned as percent of milk sales	_____%	24%	
Cash flow coverage ratio	_____	0.84	

[1]Based on 92 end of year cows per farm.

[2]Calculated at $10,900 per family plus four percent of cash receipts.

Cash available for debt service and living is the net cash farm income plus interest paid, plus off-farm income contributed to family living. Average family living expenses have been estimated as indicated. Individual farmers should base their estimates of family living expenses on information from their records. Subtracting family living expenses from total cash available leaves cash available for debt payments and capital purchases made with cash.

Debt payments planned represent the outstanding commitments as of January 1, 1985. The reasonableness of the debt commitment can be more easily appraised by computing debt payments per cow and payments as a percent of milk sales.

The cash flow coverage ratio shows how well cash available for debt service covers the debt payment commitments. A ratio of less than 1.0 indicates that on the average these farmers will not be able to meet their 1985 repayment schedules unless net cash farm income increases and/or family living expenses are less than estimated. An additional $7,008 is needed to meet 1985 scheduled debt commitments on the average of these 458 dairy farms.

ANALYSIS OF THE FARM BUSINESS

A systematic analysis of the operation helps to locate strengths and weaknesses in the business. In this section, five business factors are examined: size of business, rates of production, labor efficiency, capital efficiency, and cost control. The 1984 averages of selected measures for these factors for the 458 farms, and the average for the 10 percent with the highest labor and management incomes per operator, are reported along with general relationships of factors to labor income. Since the measures examined are interrelated, all factors should be studied before arriving at major conclusions.

Size of Business

Size has an effect on other factors such as labor efficiency, cost control, and capital efficiency. The prices received and paid are often affected by volume which is a function of size. Farm management studies show that, in general, larger farm businesses (when well managed) earn larger labor and management incomes. Two basic reasons for this are that larger businesses make possible more efficient use of overhead inputs, such as labor and machinery, and there are more units on which to make a profit.

Table 18. MEASURES OF SIZE OF BUSINESS
458 New York Dairy Farms, 1984

Measure	My Farm	Average 458 Farms	Average Top 10% Farms
Number of cows	_____	89	180
Number of heifers	_____	76	150
Worker equivalent	_____	3.08	4.92
Total tillable acres	_____	280	475
Pounds of milk sold	_____	1,373,500	3,077,800
Total work units	_____	1,000	1,966
Total cash receipts	$_____	$209,155	$462,771
Total investment (end inventory)	$_____	$507,875	$931,149

Number of cows is the average number in the herd for the year. Where available, the DHI annual average is used.

Total tillable acres includes all acres on which crops could have been grown during the 1984 year. It includes cropland pasture and idle cropland.

Worker equivalent is all of the labor used on the farm during the year in terms of full-time worker years. Work of part-time employees and family members is converted to full-time worker equivalent.

Total work units represents the number of productive worker days that would be required under average conditions to care for the acreage of crops grown and the number of livestock handled. One worker unit is the average amount of productive work accomplished in 10 hours of work.

The relationship of business size to farm business profits can be observed in Tables 19 and 20. Farm size is measured by number of cows. In general, the larger the businesses, the higher the level of farm incomes. This relationship is consistent with that of earlier studies. A well managed large farm will provide the operator a higher income than a well managed small farm, but a large, poorly managed farm can lose more than a small one.

Table 19. COWS PER FARM AND LABOR AND MANAGEMENT INCOME
458 New York Dairy Farms, 1984

Number of Cows	Number of Farms	Ave. Number of Cows	Percent of Farms	Labor & Mgmt. Income Per Operator
Under 40	45	33	10	$-3,778
40 to 54	100	47	22	560
55 to 69	94	61	21	-1,395
70 to 84	64	77	14	-874
85 to 99	43	91	9	-389
100 to 149	56	124	12	2,429
150 to 199	25	170	6	912
200 to 249	16	229	3	4,663
250 & over	15	359	3	52,247

Number of cows is a good measure of size on the dairy farm because it measures the variability in the key source of production, the dairy herd. As size of herd varied from less than 40 cows to 250 and more in 1984, labor and management income increased from $-3,778 per operator to more than $52,200.

There is a strong relationship between farm size and farm income when net cash farm income and labor, management, and ownership income are compared with cows per farm. Net cash farm income increased 1,269 percent while labor, management, and ownership income per operator jumped $87,793 as herd size increased from less than 40 to over 250 cows per farm.

Table 20. FARM SIZE AND FARM INCOME MEASURES
458 New York Dairy Farms, 1984

Number of Cows	Number of Farms	Worker Equivalent	Net Cash Farm Income	Labor, Management & Ownership Income Per Operator
Under 40	45	1.75	$ 13,859	$ 4,673
40 to 54	100	2.08	21,903	11,181
55 to 69	94	2.50	27,521	12,939
70 to 84	64	2.92	35,043	14,767
85 to 99	43	3.08	37,761	13,939
100 to 149	56	3.92	50,540	26,016
150 to 199	25	4.67	61,888	28,035
200 to 249	16	6.17	99,443	48,799
250 & over	15	8.58	189,734	92,466

Rates of Production

Production per animal and per acre are major factors affecting farm profits. Milk sold per cow is the most reliable production measure used in dairy farm analysis.

Table 21. MEASURES OF RATES OF PRODUCTION
458 New York Dairy Farms, 1984

Item	My Farm Acres	My Farm Yield	458 Farms Farms Reporting	458 Farms Average* Acres	458 Farms Average* Yield	Ave. Yield Top 10% Farms
Milk sold per cow (lbs.)		_____	458		15,433	17,099
All hay crops (tons dry matter/acre)	_____	_____	456	143	2.7	3.3
Corn silage (tons/acre)	_____	_____	422	76	14.0	16.0
All forage crops (tons dry matter/acre)	_____	_____	458	215	3.3	4.3
Grain corn (bu./acre)	_____	_____	236	72	90.6	94.2
Oats (bu. per acre)	_____	_____	86	27	51.9	60.7
Wheat (bu. per acre)	_____	_____	29	38	47.4	49.0

*Average for farms reporting the crop.

Pounds of milk sold per cow is calculated by dividing the total pounds of milk sold for the year by the average number of cows. No adjustment is made for differences in the butterfat test of the milk.

Tons of hay crops dry matter per acre is calculated by adding the tons of dry matter from hay crop silage and green chop to dry hay and dividing by the total acres of cropland used for hay crops. Tons of dry matter per acre of all forages is determined by adding tons of dry matter of corn silage, hay crops, and other forage and dividing by total forage crop acres.

Farms with higher rates of production tend to have higher profits. In 1984, the farms that sold more than 16,000 pounds of milk per cow had substantially higher profit margins and higher than average herd sizes.

Table 22. MILK SOLD PER COW AND LABOR AND MANAGEMENT INCOME
458 New York Dairy Farms, 1984

Pounds of Milk Sold Per Cow	Number of Farms	Number of Cows	Labor & Mgmt. Income/Oper.	Labor, Mgmt., & Ownership Income/Operator
Under 11,000	32	56	$-5,189	$ 5,094
11,000 to 11,999	28	59	-1,873	8,333
12,000 to 12,999	30	70	-5,086	4,424
13,000 to 13,999	55	80	-1,570	14,425
14,000 to 14,999	81	95	1,749	20,203
15,000 to 15,999	83	88	-354	18,540
16,000 to 16,999	69	105	5,105	29,698
17,000 to 17,999	41	97	5,178	25,480
18,000 & over	39	123	17,053	33,981

Labor Efficiency

Labor inputs account for about one-sixth of the costs in producing milk. Therefore, it is important that labor be used efficiently. Output or productivity per worker is used to measure labor efficiency. This is an important factor affecting labor and management incomes.

Table 23. MEASURES OF LABOR EFFICIENCY
458 New York Dairy Farms, 1984

Measure	My Farm	Average 458 Farms	Average Top 10% Farms
Number of cows per worker	_____	29	37
Pounds of milk sold per worker	_____	445,942	625,569
Work units per worker	_____	325	400
Tillable acres per worker	_____	91	97

Pounds of milk sold per worker is determined by dividing the total pounds of milk sold by the worker equivalent. This is the best measure of labor efficiency for dairy farms.

Labor productivity (efficiency) depends on a number of factors. Among these are the amount of mechanization, the field and building layout, the work methods used, and the abilities of the workers. All of these are management items under the control of the operator.

The decile of farms with the highest labor and management income per operator were considerably above the average of all 458 farms in the four measures of labor efficiency. The top 10 percent sold 40 percent more milk per worker than the average of all farms.

The relationship of labor efficiency to labor, management, and ownership income was very positive on the 458 farms. The higher output per worker was achieved by more and better cows.

Table 24. MILK SOLD PER WORKER AND LABOR AND MANAGEMENT INCOME
458 New York Dairy Farms, 1984

Pounds of Milk Sold Per Worker	Number of Farms	Number of Cows	Lbs. Milk Per Cow	Labor & Mgmt. Income Per Operator	Labor, Mgmt., & Ownership Income Per Operator
Under 250,000	50	46	11,476	$-5,332	$ 2,129
250,000 to 299,999	36	50	12,894	-6,278	6,802
300,000 to 349,999	56	61	14,639	-788	12,045
350,000 to 399,999	71	67	14,590	2,541	16,852
400,000 to 449,000	75	85	15,222	-1,927	14,227
450,000 to 499,999	54	83	15,567	-3,061	13,127
500,000 to 599,999	70	119	15,861	5,933	33,758
600,000 & over	46	208	16,838	25,295	55,829

Capital Efficiency

Capital is a major farm resource and it is important to analyze how efficiently it is used in the business. The measure of total capital invested examined here is the end-of-year total farm inventory which averaged $507,875 per farm on the 458 farms. This includes both owned and borrowed capital for all farms. The use of borrowed capital or credit is part of capital management.

Table 25. MEASURES OF CAPITAL EFFICIENCY
458 New York Dairy Farms, 1984

Measure	My Farm	Average 458 Farms	Average Top 10% Farms
Total capital per worker	$_____	$164,894	$189,258
Total capital per cow	$_____	$5,520	$4,850
Total capital per cwt. milk sold	$_____	$37	$30
Machinery & equipment per cow	$_____	$1,057	$767
Land & building inventory per cow	$_____	$2,731	$2,285
Land & building inventory per tillable acre owned	$_____	$1,344	$1,375
Capital turnover, years	_____	2.3	1.8

The comparisons in Table 25 suggest that efficiency in the use of capital can be obtained by keeping more cows without a corresponding increase in capital investment. A high investment per worker equivalent does not necessarily mean strong capital efficiency. High investment per worker must be accompanied by high labor productivity to result in "good" farm profits.

Capital turnover is a measure of capital efficiency as it shows the number of years of farm receipts required to equal or "turnover" capital investment. It is computed by dividing the year-end farm inventory by the year's total farm receipts. The relationship capital turnover has to labor and management income and other factors is shown in Table 26. As a general rule, dairy farmers should aim for a capital turnover of 2.5 years or less.

Table 26. CAPITAL TURNOVER AND LABOR AND MANAGEMENT INCOME
458 New York Dairy Farms, 1984

Capital Turnover Rate - Years	Number of Farms	Number of Cows	Capital Investment Per Cow	Capital Investment Per Worker	Labor & Mgmt. Income Per Operator
less than 1.5	11	154	$3,179	$116,699	$20,425
1.5 to 1.99	91	125	4,455	152,377	13,477
2.0 to 2.49	169	93	5,452	163,401	3,330
2.5 to 2.99	96	70	6,402	165,276	-3,503
3.0 to 3.49	55	65	7,105	181,747	-5,821
3.5 & over	36	55	8,627	203,644	-12,854

Cost Control

Successful dairy farm managers are able to keep costs under control. Feed, machinery, labor, and capital are major cost items and are examined in detail in this section. Profitable businesses usually maintain a "tight" control on all costs, both large and small. But, cost control should not be so tight that the efficient and economical use of important farm inputs is restricted.

Feed Costs

Feed is the largest single expense item on New York dairy farms. Purchased dairy grain and concentrates accounted for 27 percent of all cash operating expenses on the 458 dairy farms in 1984.

Dairy feed costs must be analyzed by examining the entire purchased feed and farm produced forage and grain program. The characteristics of the dairy herd including number of heifers and production, will also affect feed costs so several measures must be studied and compared to make the analysis complete.

Table 27. ITEMS RELATED TO FEED COSTS
458 New York Dairy Farms, 1984

Item	My Farm	Average 458 Farms	Average Top 10% Farms
Dairy grain & conc. bought per cow	$_____	$507	$560
Crop expense per cow	$_____	$166	$177
Grain & conc. bought per cwt. milk	$_____	$3.28	$3.27
Feed & crop expense per cwt. milk	$_____	$4.53	$4.42
Grain & concentrate purchased as percent of milk sales	_____%	24%	24%
Forage dry matter harvested per cow	_____T	8.1T	8.5T
Tillable acres per cow	_____	3.1	2.0
Fertilizer & lime per crop acre	$_____	$32	$39
Heifers as percent of cow numbers	_____%	85%	83%

The average cost of grain and concentrate bought per cow in 1984 was $507 while in 1983 it was $526. As grain and concentrate purchase prices averaged almost the same in both years, a lower rate of feeding or more economical source of protein was likely used on these farms.

Feed and crop expenses per hundredweight of milk sold include grains and concentrates purchased, hay, silage, and all other feeds purchased; fertilizer, lime, seeds, and all other crop supplies.

The 1984 forage crop supply was up eight percent per cow from 1983. On the average, 8.1 tons of dry matter were produced per cow in 1984 compared to 7.5 tons per cow in 1983. The ratio of heifers to cows increased three percent in 1984. The variability of this ratio between years and farms has an important effect on feed cost analysis.

The 46 farms with highest labor and management incomes spent more on dairy feed per cow, but combined feed and crop expense were 11¢ less per hundredweight of milk sold than the average of all farms.

Feed costs are influenced by a number of factors. Feed production costs are affected by the amount of homegrown grains fed, quality and quantity of the roughage, and the number of youngstock. Purchasing costs are influenced by the farmer's ability to purchase grains and concentrates at reasonable prices and to balance nutrients fed with energy and protein requirements.

Dairy grain and concentrate bought per cow is calculated by dividing the total expenses for dairy grains and concentrates purchased by the average number of cows. Because this also includes the amount spent for calf and heifer feed, it actually represents the feed cost per cow and the replacements being raised.

Crop expense per cow is the total spent for fertilizer and lime, seeds and plants, spray, and other crop expense divided by the average number of cows. It does not include a charge for land or machinery and fuel expenses.

Feed and crop expense per hundredweight of milk is one of the most useful feed cost measures because it accounts for variations in milk production between herds, it includes all feeds purchased on the farm, and it includes crop expenses that are associated with feed production.

Grain and concentrate purchased as percent of milk sales is calculated by dividing feed purchased by milk receipts. This is another useful measure of feed efficiency although variations in homegrown grains fed and milk prices can have an adverse effect.

Forage dry matter harvested per cow is calculated by converting all hay crops and corn silage harvested to tons of dry matter, and dividing by the average number of cows. It is a measure of the forage supply available for a 12 month feeding season.

Heifers as percent of cow numbers is figured by dividing the number of heifers by the number of cows and multiplying by 100.

Table 28. PERCENT PURCHASED FEED IS OF MILK RECEIPTS AND LABOR AND MANAGEMENT INCOME
458 New York Dairy Farms, 1984

Percent Feed is of Milk	Number of Farms	Number of Cows	Forage Dry Matter Harvested Per Cow	Pounds Milk Per Cow	Labor & Management Income Per Operator
Over 40%	16	62	5.6	13,731	$-2,322
35 to 39	33	80	7.3	14,691	-964
30 to 34	90	78	7.6	15,155	-4,827
25 to 29	117	89	7.7	15,400	6,198
20 to 24	81	100	8.4	15,729	6,693
15 to 19	70	103	8.8	15,250	404
Under 15%	51	92	8.7	15,465	3,601

Generally, the lower the percent of the milk check going for purchased feed, the higher the income. If purchased feed is restricted enough, to cause substantial declines in production, profits will fall. Farmers spending less than 30 percent but more than 19 percent of their milk receipts for purchased feed in 1984 appear to be practicing the most effective feed cost control.

Machinery Costs

Machinery accounted for 19 percent of the year-end farm inventory on these 458 farms. New purchases averaged 14.9% of beginning machinery inventory in 1984, a substantial decrease from the period 1976-83 where new purchases averaged 22% of beginning machinery inventory. The cost of owning and operating machinery accounted for 18 percent of the total farm expenses.

Table 29. MACHINERY COSTS
458 New York Dairy Farms, 1984

Item	My Farm	Average 458 Farms Amount	Average 458 Farms Percent	Average Top 10% Farms
Depreciation (from page 7)	$_____	$15,345	40	$25,257
Interest @ 5% on average inventory	_____	4,793	12	7,138
Machine hire	_____	1,514	4	3,370
Machinery repairs	_____	9,519	25	19,234
Auto expense (farm share)	_____	464	1	423
Gas & oil	_____	6,903	18	12,739
Total Machinery Costs	$_____	$38,538	100	$68,161
Machinery cost:				
per cow	$_____	$433		$379
per hundredweight of milk sold	$_____	$2.81		$2.21

Depreciation accounted for 40 percent of the total machinery costs and interest 12 percent. These two fixed cost items are often overlooked in a casual examination of machine operating costs. Repairs were the second largest cost item and one which must be kept in line if costs are to be kept under control. The cost of gasoline and oil increased four percent per cow in 1984 following decreases of seven percent in 1983 and four percent in 1982. In 1984 machinery costs averaged $433 per cow, compared to $413 in 1983 and $432 in 1982.

There is a relationship between machinery costs and returns to labor and management. Machinery costs exceeding $500 per cow on specialized dairy farms are too high. As machinery cost per cow increased labor costs per cow showed an upward trend. This indicates that if substitution of machinery for labor is occurring, major cost savings are not apparent.

Table 30. MACHINERY COST PER COW AND LABOR AND MANAGEMENT INCOME
458 New York Dairy Farms, 1984

Machinery Cost Per Cow	Number of Farms	Number of Cows	Labor Cost Per Cow	Labor & Management Income Per Operator
Under $300	79	94	344	$11,931
$300 to 349	48	90	322	1,846
350 to 399	68	94	348	8,069
400 to 449	66	97	398	2,350
450 to 499	63	89	384	1,042
500 & over	134	80	379	-5,376

Labor costs should not be overlooked in a farm business analysis even though the farm family provides a large part of the labor supply. On these 458 farms, the family (including paid family labor) provided 65 percent of the labor input, while hired nonfamily labor provided 35 percent (page 5). The operator's and other unpaid family labor are assigned values and included in Tables 31 and 32.

Table 31. LABOR COSTS
458 New York Dairy Farms, 1984

Item	My Farm	Average 458 Farms	Average Top 10% Farms
Value operator's labor (@$750/month)	$_____	$11,841	$12,016
Hired labor expense (from page 10; includes paid family labor)	_____	19,114	53,576
Unpaid family labor (@ $500/month)	_____	1,635	1,250
Total Labor Costs	$_____	$32,590	$66,842
Labor cost per cow	$_____	$366	$371
Labor cost per cwt. milk	$_____	$2.37	$2.17
Cost per month hired labor	$_____	$1,062	$1,339
Cost per month all labor	$_____	$910	$1,246

Although the top decile farms paid $277 per month more for hired labor and $336 per month more for all labor than the average of the 458 farms, superior labor efficiency kept labor costs per hundredweight of milk sold well below average.

Labor and machinery should operate as a "team". The challenge is to find a combination of labor and machinery that will result in low cost per unit of milk sold. On these 458 farms the machinery costs were higher than labor costs. The labor and machinery costs per hundredweight of milk for the top 46 farms were 80¢ less than the average for all farms.

Table 32. LABOR AND MACHINERY COSTS
458 New York Dairy Farms, 1984

Item	My Farm	Average 458 Farms	Average Top 10% Farms
Total labor costs	$_____	$32,590	$ 66,842
Total machinery costs	_____	38,538	68,161
Total Labor & Machinery Costs	$_____	$71,128	$135,003
Labor & machinery costs per cow	$_____	$799	$750
Labor & machinery costs per cwt. milk	$_____	$5.18	$4.38

Miscellaneous Costs

Costs in addition to feed, machinery, and labor make up a sizable amount on a dairy farm. The "cost conscious" manager checks on all cost items both large and small. Good cost management requires careful planning and priority spending on farm inputs that will pay dividends when the checkbook is balanced at the end of the month. A number of miscellaneous cost items are reported in Table 33 to help in a detailed checkup on all farm costs.

Table 33. MISCELLANEOUS COST CONTROL MEASURES
458 New York Dairy Farms, 1984

Item	My Farm	Average 458 Farms	Average Top 10% Farms
Livestock			
Breeding fees per cow	$_____	$32	$36
Veterinary & medicine per cow	$_____	$44	$56
Other livestock expense per cow	$_____	$84	$82
Milk marketing per cow	$_____	$159	$152
Milk marketing per cwt. milk	$_____	$1.03	$0.89
Cattle lease per cow	$_____	$1	$0
Real Estate			
Taxes per cow	$_____	$51	$40
Taxes per $1,000 year-end real estate value	$_____	$18	$17
Insurance paid per cow	$_____	$31	$24
Cash rent paid per cow	$_____	$40	$44
Cash rent paid per acre rented	$_____	$26	$41
Real estate expense per cow	$_____	$151	$134
Capital Cost			
Interest paid per cow	$_____	$215	$214
Interest on equity per cow	$_____	$189	$166
Interest paid as percent of year-end debt	_____%	9.4%	9.7%
Depreciation per cow	$_____	$255	$220
Fixed & Variable Costs*			
Total fixed costs per cow	$_____	$828	$741
Total variable costs per cow	$_____	$1,559	$1,719
Variable costs per cwt. of milk sold	$_____	$10.10	$10.05

*Fixed costs include real estate repairs, taxes, insurance, rent, interest paid, depreciation, unpaid family labor, and interest on equity capital. All other costs were classified as variable.

Milk marketing costs increased 12 percent per cow and 11 percent per hundredweight on these farms in 1984. Nearly all of the increase can be attributed to the 50 cent federal milk assessment and increased promotion deduction.

Fixed costs on the top decile farms were 12 percent below the 458 farm average. This is related to more intensive use of cows and cropland through better management. Variable costs were five cents lower per hundredweight of milk sold on the top farms.

Combination of Factors

Individual factors representing size of business, rates of production, labor and capital efficiency, and cost control, have been examined in the analysis up to this point. It has been suggested that these factors are interrelated. On this page, the combination of four important factors is studied. The factors combined are the number of cows per farm, pounds of milk sold per cow, pounds of milk sold per worker, and percent purchased feed was of milk receipts.

For each factor, the farms were divided on the basis of whether they were above or below the average for the 458 farms. They were then grouped on the basis of the number of factors better than average. The combination of factors above or below average within the three middle groups varied.

The relationship between the number of factors better than average and labor and management income is shown in Table 34. As the number of factors better than average decreased, labor and management income decreased at a rapid rate.

Table 34. COMBINATION OF FACTORS ABOVE AVERAGE* AND LABOR AND MANAGEMENT INCOME
458 New York Dairy Farms, 1984

Number of Factors Above Average	Number of Farms	Percent of Farms	Labor & Management Income Per Operator
4 factors better than average	42	9	$ 9,900
3 factors better than average	100	22	5,800
2 factors better than average	115	25	500
1 factor better than average	121	26	-3,100
0 factors better than average	80	17	-4,100

*Factors were:

Size - number of cows - average 89.

Rates of production - pounds of milk sold per cow - average 15,433.

Labor efficiency - pounds of milk sold per worker - average 445,942.

Cost control - percent purchased feed was of milk receipts - average 24%.

The top decile farms averaged 180 cows, 17,099 pounds of milk sold per cow, 625,569 pounds of milk sold per worker, and purchased feed was 24 percent of milk sales. Labor and management income averaged $44,039 per operator on these farms. Obviously, other business factors excluded from the combination in Table 34 have a strong affect on business profits. These include labor, machinery and crop expenses, capital efficiency, financial management, crop yields, and the receipts from milk and cattle sales.

It is important in managing a farm business to give attention to all major factors affecting the business. Concentrating on only one or two factors and neglecting the others will not give the kind of net return most farmers want.

Farm Business Chart

The Farm Business Chart is a tool which can be used in analyzing a business by drawing a line through the figure in each column which represents the current level of management performance. The figure at the top of each column is the average of the top 10 percent of the 458 farms for that factor. The other figures in each column are the average for the second 10 percent, third 10 percent, etc. Each column of the chart is independent of the others. The farms which are in the top 10 percent for one factor would not necessarily be the same farms which make up the top 10 percent for any other factor.

Table 35. FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS
458 New York Dairy Farms, 1984

Size of Business			Rates of Production			Labor Efficiency	
Worker Equivalent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop D.M./ Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
6.8	255	4,211,900	18,800	4.7	20	45	697,300
4.3	138	2,118,100	17,300	3.7	18	36	560,900
3.6	100	1,551,500	16,500	3.3	16	33	503,900
3.1	83	1,287,200	15,900	2.9	15	30	456,100
2.8	72	1,090,400	15,300	2.7	14	28	423,300
2.5	63	950,300	14,800	2.5	13	26	392,200
2.2	56	818,600	14,200	2.3	12	25	361,400
2.0	49	691,500	13,400	2.0	12	23	328,000
1.7	43	577,800	12,200	1.7	10	20	275,500
1.4	33	395,200	10,000	1.3	8	16	191,300

Feed Bought Per Cow	% Feed is of Milk Receipts	Machinery Costs Per Cow	Labor and Machinery Costs Per Cow	Feed and Crop Expenses Per Cwt. Milk
$214	11%	$205	$ 511	$2.75
306	16	286	610	3.47
369	19	337	662	3.87
432	22	379	713	4.21
474	25	408	771	4.45
523	27	445	818	4.68
574	28	481	873	4.97
624	31	519	928	5.31
685	33	580	1,004	5.72
809	40	765	1,201	6.73

The cost control factors are ranked from low to high, but the lowest cost is not necessarily the most profitable. In some cases, the "best" management position is somewhere near the middle or average. Many things affect the level of costs, and must be taken into account when analyzing the factors.

FINANCIAL ANALYSIS AND MANAGEMENT

Analysis and astute management of farm financial affairs must receive high priority if the farm business is to be successful and if the farm family is to achieve a reasonable living standard.

The Farm Finance Checklist, Table 36, and the Financial Analysis Chart, Table 37, are provided to serve as guidelines. Dairy farmers can determine how their financial management measures up by comparing with average data from other farms.

Table 36. A FARM FINANCE CHECKLIST
458 New York Dairy Farms, 1984

	My Farm	Ave. 458 New York Farms	Ave. Top 10% Farms[1]
How farm assets are being used:			
Total inventory (capital) per cow	$_____	$5,520	$4,850
Farm assets in livestock	_____%	22%	25%
Farm assets in farm real estate	_____%	47%	44%
Farm assets in machinery	_____%	18%	15%
Measures of debt capacity and debt structure:			
Equity in the business	_____%	64%	61%
Farm debt per cow	$_____	$2,209	$2,070
Long term debt/asset ratio[2]	_____	0.45	0.47
Inter. & short term debt/asset ratio[2]	_____	0.29	0.32
Inter. & short term debt as % of total	_____%	43%	48%
Debt repayment ability:			
Cash flow coverage ratio	$_____	0.84	1.15
Scheduled debt payments per cow	$_____	$487	$484
Scheduled debt pymts. as % of milk check	_____%	24%	23%

Indicators of annual financial progress:		Average of same 343 Farms 1983 and 1984	
		Amount	Percent
Annual change in farm assets	$_____	+$15,728	+ 3.0%
Annual change in farm debts	$_____	+ $6,844	+ 3.5%
Annual change in farm net worth	$_____	+ $8,884	+ 2.7%

[1]Forty-six farms with highest returns to labor and management per operator.
[2]Long or intermediate and short term debt divided by long or intermediate and short term assets.

The most profitable farms carried $139 less debt per cow and had a greater ability to make 1985 debt payments although equity in their business was three percent less than that of the average.

Farm debts grew faster than farm assets between 1983 and 1984 and net worth increased less than the annual rate of inflation.

Financial Analysis Chart

The farm financial analysis chart is designed just like the Farm Business Chart in Table 35 on page 28 and may be used to measure the financial health of the farm business. Most of the financial measures used are defined on pages 14 through 16 and 21 in this publication.

Table 37. FINANCIAL ANALYSIS CHART
458 New York Dairy Farms, 1984

Liquidity (Repayment)				
Debt Payments Per Cow	Available for Debt Service Per Cow	Cash Flow Coverage Ratio	Debt Payments as Percent of Milk Sales	Debt Per Cow
$ 36	$909	7.67	2	$ 104
176	640	2.16	9	638
277	537	1.41	14	1,142
362	469	1.10	19	1,625
438	411	.91	22	1,930
500	357	.75	26	2,377
571	279	.58	30	2,688
656	216	.46	35	3,161
752	126	.28	40	3,770
971	-95	-.56	52	5,072

Solvency				Efficiency & Profitability		
		Debt/Asset Ratio		Capital	Rate of Return on	
Leverage Ratio[1]	Percent Equity	Current & Intermediate	Long Term	Turnover (years)	Equity	Investment[2]
.02	99	.00	.00	1.60	18%	13%
.12	90	.04	.02	1.90	8	9
.24	81	.11	.14	2.06	5	7
.37	73	.16	.30	2.20	3	6
.51	67	.23	.41	2.34	1	4
.70	60	.29	.51	2.51	-1	3
.94	53	.37	.62	2.66	-3	1
1.22	46	.45	.73	2.95	-6	0
1.72	38	.55	.85	3.25	-11	-3
5.04	20	.80	1.27	4.54	-37	-8

[1]Dollars of debt per dollar of equity, computed by dividing total liabilities by total equity.

[2]Return on all farm capital (no deduction for interest paid) divided by total farm assets.

SUPPLEMENTAL INFORMATION

Dairy Diversion Program

The 458 dairy farms summarized in the main body of this report include 56 dairy diversion program cooperators that contracted to reduce milk marketings and thereby received diversion payments. Table 38 compares average business and financial data from the 56 dairy diversion participants with the average of 402 nonparticipating dairy farmers.

Total capital invested in the farm business increased 2.7 percent on the nondiversion dairy farms but only 0.6 percent on the diversion farms. Even though cow numbers dropped 10 percent on the diversion farms, the total market value of the inventory items increased primarily as a result of new real estate investments and appreciation. Diversion cooperators bought new machinery and equipment at approximately the same rate as nonparticipants. Total farm investment per cow owned increased 12 percent during 1984 to $6,316 on the diversion farms but dropped one percent to $5,455 per cow owned on the nondiversion farms.

Total cash expenses averaged $1,950 per cow on the diversion farms and $1,880 on the nondiversion farms during 1984. Feed and livestock expenses were lower while machinery costs and overhead expenses per cow were higher on the diversion farms. Total cash receipts averaged $2,440 per cow on the diversion farms and $2,312 on the nondiversion dairy farms. Diversion participants received approximately $20,000 in milk diversion payments per farm in 1984. Payments earned for the last quarter of 1984 are not included as 1984 income. If last quarter diversion payments were $7,000 per farm and credited to 1984 receipts, labor and management income would have averaged $3,500 per farm on the dairy diversion farms, only $400 less than nondiversion farms. Net cash farm income on diversion farms was within $1,000 of nondiversion farms and with the accounting for diversion payments earned but not received, would have been greater by approximately $6,000 on diversion farms.

Three Year Comparisons

Table 39 is a three-year comparison of selected business factors from 43 dairy diversion farms. Included are dairy-cash crop, and part-time dairy farms as well as specializd dairy farms. Table 40 is a comparison of business factors from 300 nondiversion dairy farms that have participated in the Cooperative Extension Farm Business Summary Program for the last three consecutive years.

Cow numbers decreased by 13 to 76 from 1982 to 1984 on diversion farms while cow numbers increased by 7 to 94 on nondiversion farms. Heifers as a percent of cow numbers is higher on diversion farms indicating the likely prospect for increased herd size in 1985. Crop acreage was constant on diversion farms while increasing 20 acres from 1982 to 1984 on nondiversion farms.

Milk sales per cow declined 600 pounds on diversion farms while increasing almost 800 pounds on nondiversion farms.

Over the three years, these same farms show very similar profitability patterns when adjusted for 1984 earned diversion payments. Net worth is down slightly on diversion farms, while increasing over $11,000 on nondiversion farms.

Table 38. COMPARISON OF 56 DAIRY DIVERSION PARTICIPANTS WITH 402 NONDIVERSION PARTICIPANTS
New York Dairy Farms, 1984

Item	Average of 56 Dairy Diversion Farms		Average of 402 Nondiversion Farms	
CAPITAL INVESTMENT	1/1/84	1/1/85	1/1/84	1/1/85
Livestock	$116,591	$108,962	$118,437	$119,562
Feed & supplies	34,665	36,859	39,177	41,637
Machinery & equipment	91,250	92,967	94,874	97,885
Land & buildings	266,157	272,769	241,387	248,277
TOTAL INVESTMENT	$508,663	$511,557	$493,875	$507,361
Number of Cows (owned)	90	81	90	93
EXPENSES				
Hired Labor	$ 17,033		$ 19,404	
Feed				
Dairy grain & concentrate	38,641		46,010	
Hay & other	2,395		2,382	
Machinery				
Machine hire	1,595		1,503	
Machinery repair	11,055		9,305	
Auto expense	422		470	
Gas & oil	7,209		6,860	
Livestock				
Replacement livestock	1,796		1,318	
Breeding fees	2,176		2,894	
Veterinary & medicine	3,078		4,065	
Milk marketing	12,038		14,442	
Cattle lease	119		95	
Other livestock expense	6,705		7,596	
Crops				
Fertilizer & lime	9,410		8,994	
Seeds & plants	2,840		3,026	
Spray & other	2,383		2,765	
Real Estate				
Land, building, fence repair	2,614		2,526	
Taxes	5,019		4,422	
Insurance	3,106		2,756	
Rent	1,959		3,832	
Other				
Telephone (farm share)	744		585	
Electricity (farm share)	4,720		4,398	
Interest paid	20,028		19,051	
Miscellaneous	2,809		2,337	
Total Cash Expenses	$159,894		$171,036	
Expansion livestock	1,519		1,689	
Machinery depreciation	15,490		15,324	
Building depreciation	6,954		7,357	
Unpaid labor @ $500 per month	973		1,727	
Interest on farm equity @ 5%	15,555		16,985	
TOTAL FARM EXPENSES	$200,385		$214,118	

Table 38. continued — COMPARISON OF 56 DAIRY DIVERSION PARTICIPANTS WITH 402 NONDIVERSION PARTICIPANTS
New York Dairy Farms, 1984

Item	Average of 56 Dairy Diversion Farms	Average of 402 Nondiversion Farms
RECEIPTS		
Milk sales	$154,816	$189,462
Crop sales	2,060	2,153
Dairy cattle sold	15,422	11,797
Other livestock sales	2,376	2,787
Gas tax refund	311	177
Government payments	20,980	700
Custom machine work	199	362
Miscellaneous	3,949	2,980
Total Cash Receipts	$200,113	$210,418
Increase in livestock	$ -5,339	5,098
Increase in feed & supplies	2,194	2,460
Appreciation	8,331	6,106
TOTAL FARM RECEIPTS	$205,299	$224,082
TOTAL FARM RECEIPTS EXCLUDING APPRECIATION	$196,968	$217,976
FINANCIAL SUMMARY		
Net Cash Farm Income	$ 40,219	$ 39,382
Labor, Management & Ownership Income Per Farm	$ 20,469	$ 26,949
Number of Operators	(73) 1.29	(534) 1.32
Labor, Management & Ownership Income Per Operator	$ 15,867	$ 20,416
Labor & Management Income Per Farm	$ -3,417	3,858
Labor & Management Income Per Operator	$ -2,649	$ 2,923
Rate of Return on Equity Capital Including Appreciation	-0.5%	1.5%
BUSINESS FACTORS		
Worker equivalent	2.92	3.08
Number of cows	82	91
Number of heifers	75	76
Acres of hay crops*	168	138
Acres of corn silage*	66	70
Total tillable acres	303	277
Pounds of milk sold	1,145,700	1,405,200
Pounds of milk sold per cow	13,972	15,442
Tons hay crop dry matter per acre	2.3	2.8
Tons corn silage per acre	13.6	14.1
Cows per worker	28	30
Pounds milk sold per worker	392,363	456,234
Percent feed is of milk receipts	25%	24%
Feed & crop expense per cwt. milk	$4.86	$4.50
Fertilizer & lime per crop acre	$31	$32
Machinery cost per cow	$492	$421
Average price per cwt. milk	$13.51	$13.48

*Average of all farms.

Table 39. SELECTED BUSINESS FACTORS FOR DAIRY DIVERSION PROGRAM PARTICIPANTS SAME 43 NEW YORK FARMS, 1982-84

Item	1982	1983	1984
Size of Business			
Number of Cows	89	87	76
Number of Heifers	67	69	70
Number of Crop Acres	284	289	289
Number of Workers	3.08	2.83	2.83
Number of Operators	1.33	1.23	1.26
Milk Sold (pounds)	1,303,000	1,286,300	1,065,200
Rates of Production			
Milk Sold Per Cow (pounds)	14,640	14,785	14,016
Hay DM Per Acre (tons)	2.4	2.3	2.4
Corn Silage Per Acre (tons)	13.7	14.0	13.1
Labor Efficiency			
Cows Per Worker	29	31	27
Milk Sold Per Worker (pounds)	423,052	454,523	376,396
Income Analysis and Cost Control			
Milk Sales Per Cow	$1,970	$2,012	$1,888
Cattle Sales Per Cow	$123	$149	$186
Government Receipts Per Cow	$12	$32	$276
Average Gross Price Per Cwt. Milk Sold	$13.45	$13.61	$13.47
Average Effective Price*	$13.45	$13.13	$12.97
Feed Purchases as Percent of Milk Sold	27%	28%	26%
Feed and Crop Expenses Per Cwt. of Milk	$4.69	$4.96	$4.95
Labor and Machinery Costs Per Cow	$746	$738	$865
Profitability			
Net Cash Farm Income	$39,538	$40,001	$37,891
Labor and Management Income Per Farm	$4,591	$1,904	$-4,237
Labor and Management Income Per Operator	$3,452	$1,548	$-3,363
Labor, Mgt. & Ownership Income Per Farm	$23,585	$13,941	$17,237
Rate of Return on Equity	0.7%	-2.2%	-1.3%
Financial Situation			
Farm Assets	$493,255	$489,636	$484,148
Farm Liabilities	$198,339	$194,280	$195,116
Farm Net Worth	$294,916	$295,356	$289,032
Percent Equity	61%	62%	62%
Debt Per Cow	$2,229	$2,286	$2,637
Cash Flow Coverage Ratio	0.99	1.01	0.86

*Average gross price per cwt. milk sold minus $.48 in 1983 and $.50 in 1984.

Table 40. SELECTED BUSINESS FACTORS FOR DAIRY DIVERSION PROGRAM NONPARTICIPANTS SAME 300 NEW YORK FARMS, 1982-84

Item	1982	1983	1984
Size of Business			
Number of Cows	87	91	94
Number of Heifers	72	77	80
Number of Crop Acres	279	288	299
Number of Workers	3.00	3.08	3.17
Number of Operators	1.34	1.34	1.34
Milk Sold (pounds)	1,299,900	1,415,200	1,478,900
Rates of Production			
Milk Sold Per Cow (pounds)	14,941	15,552	15,733
Hay DM Per Acre (tons)	2.7	2.7	2.8
Corn Silage Per Acre (tons)	14.7	13.7	14.3
Labor Efficiency			
Cows Per Worker	29	30	30
Milk Sold Per Worker (pounds)	433,300	459,481	466,530
Income Analysis and Cost Control			
Milk Sales Per Cow	$2,027	$2,119	$2,119
Cattle Sales Per Cow	$132	$128	$133
Government Receipts Per Cow	$8	$17	$11
Average Gross Price Per Cwt. Milk Sold	$13.56	$13.62	$13.47
Average Effective Price*	$13.56	$13.14	$12.97
Feed Purchases as Percent of Milk Sold	23%	24%	24%
Feed and Crop Expenses Per Cwt. of Milk	$4.53	$4.53	$4.49
Labor and Machinery Costs Per Cow	$811	$800	$817
Profitability			
Net Cash Farm Income	$41,156	$45,002	$42,056
Labor and Management Income Per Farm	$8,131	$11,426	$5,199
Labor and Management Income Per Operator	$6,068	$8,527	$3,880
Labor, Mgt. & Ownership Income Per Farm	$29,114	$26,454	$28,657
Rate of Return on Equity	2.4%	1.5%	1.9%
Financial Situation			
Farm Assets	$537,512	$548,425	$564,482
Farm Liabilities	$197,402	$203,527	$208,562
Farm Net Worth	$340,110	$344,898	$355,920
Percent Equity	65%	64%	65%
Debt Per Cow	$2,193	$2,165	$2,128
Cash Flow Coverage Ratio	0.94	0.97	0.83

*Average gross price per cwt. milk sold minus $.48 in 1983 and $.50 in 1984.

Cost of Producing Milk

The "whole farm data" method is used here to compute the cost of producing milk. Costs of production are divided into ten categories and presented for the 458 New York dairy farms and the 402 nondairy diversion farms in Table 42 on the following page. Nonmilk receipts are deducted on the assumption they were produced at cost. Total costs of production are eight cents per hundredweight lower when dairy diversion farms are excluded from the sample. Machinery and overhead costs per hundredweight of milk were significantly higher on the diversion farms. Dairy diversion income is included as a credit or negative cost of production under miscellaneous expenses. Total costs of production are computed with and without a management charge set at five percent of cash receipts. Operators' labor, excluding management, is included under labor costs at $750 per month.

The total cost of producing milk on all 458 dairy farms averaged $14.89 per hundredweight, $1.39 more than the average price received for milk sold from these farms during 1984. In 1983 the total cost of producing milk averaged $14.75 on 510 New York dairy farms, $1.11 per hundredweight more than the average price received. This implies dairy farmers are willing to receive less than the stated returns on their labor and equity capital to remain in farming.

Size of herd and level of milk production are important factors related to the cost of producing milk. The cost of production for nine herd size categories and nine production levels is shown in Table 41. The average cost excluding management was $14.98 for herds with less than 100 cows, and $13.53 for those with 100 cows or more, for a difference of $1.45 per hundredweight. Farms selling less than 11,000 pounds of milk per cow had an average cost of production (excluding management) of $16.83, while those selling 16,000 pounds and over averaged approximately $13.42 for a difference of $3.41 per hundredweight.

Table 41. FARM COST OF PRODUCING MILK BY HERD SIZE AND MILK SOLD PER COW
458 New York Dairy Farms, 1984

By Herd Size			By Milk Sold Per Cow		
Number of Cows	Cost/Cwt. With Mgt. Excluded	Cost/Cwt. With Mgt. Included	Milk Sold Per Cow, lbs.	Cost/Cwt. With Mgt. Excluded	Cost/Cwt. With Mgt. Included
Under 40	$16.32	$17.09	Under 11,000	$16.83	$17.63
40 to 54	14.95	15.71	11,000 to 11,999	15.88	16.68
55 to 69	14.87	15.64	12,000 to 12,999	15.34	16.11
70 to 84	14.28	15.04	13,000 to 13,999	14.90	15.68
85 to 99	14.47	15.22	14,000 to 14,999	14.28	15.06
100 to 149	14.14	14.90	15,000 to 15,999	14.37	15.12
150 to 199	13.95	14.73	16,000 to 16,999	13.71	14.46
200 to 249	13.87	14.65	17,000 to 17,999	13.75	14.51
250 & over	12.17	12.91	18,000 & over	12.80	13.54

Table 42. COST OF PRODUCING MILK BASED ON WHOLE FARM DATA
458 New York Dairy Farms and
402 Nondiversion Dairy Farms, 1984

Cost Item	Average of 458 N.Y. Dairy Farms Total	Cost/cwt.	Ave. of 402 Nondiversion Dairy Farms Total	Cost/cwt.
Feed and Crop Expense				
Dairy Grain and Concentrate	$45,109		$46,010	
Hay and Other Feed Purchased	2,383		2,382	
Fertilizer and lime	9,045		8,994	
All Other Crop Expenses	5,722		5,791	
(-) Crop Sales & Payments	-2,907		-2,853	
(-) Inc. in Feed & Supplies	-2,428		-2,460	
TOTAL	$56,924	$4.14	$57,864	$4.13
Labor Costs				
Oper. $750/mo. & Family Labor	$13,476		$13,727	
Hired Labor	19,114		19,404	
TOTAL	$32,590	$2.37	$33,131	$2.36
Machinery Costs				
Depreciation	$15,345		$15,324	
Machine Repairs, Hire & Auto	11,497		11,278	
Gas and Oil	6,903		6,860	
(-) Gas Tax Ref. & Custom Work	-535		-539	
TOTAL	$33,210	$2.42	$32,923	$2.34
Livestock Expenses				
Breeding Fees, Vet & Medicine	$ 6,750		$ 6,959	
Other Livestock Expense	7,487		7,596	
TOTAL	$14,237	$1.04	$14,555	$1.04
Milk Marketing	$12,148	$1.03	$14,442	$1.03
Livestock Ownership				
Purchased Livestock	$ 3,045		$ 3,007	
Cattle Lease	98		95	
(-) Dairy Cattle & Lvstk. Sales	-14,976		-14,584	
(-) Inc. in Livestock Inventory	-3,821		-5,089	
TOTAL	-$15,654	-$1.14	-$16,571	-$1.18
Real Estate Costs				
Land, Bldg. and Fence Repair	$ 2,537		$ 2,526	
Taxes and Insurance	7,294		7,178	
Rent/Lease	3,603		3,832	
Building Depreciation	7,308		7,357	
TOTAL	$20,742	$1.51	$20,893	$1.49
Interest Expense				
Interest Paid	$19,170		$19,051	
Interest on Equity @ 5%	16,811		16,985	
TOTAL	$35,981	$2.62	$36,036	$2.56
Miscellaneous				
Telephone and Electricity	$ 5,042		$ 4,983	
Miscellaneous	2,395		2,337	
(-) Miscellaneous Income	-5,511		-2,980	
TOTAL	$ 1,926	$0.14	$ 4,340	$ 0.31
TOTAL EXCLUDING MGT.	$194,104	$14.13	$197,613	$14.06
Mgt. Charge 5% Cash Receipts	$10,458	$0.76	$10,521	$0.75
TOTAL COST	$204,562	$14.89	$208,134	$14.81

Table 43. FARM BUSINESS SUMMARY BY HERD SIZE
458 New York Dairy Farms, 1984

Item / Farm Size:	Less than 40 cows	40 to 54 cows	55 to 69 cows	70 to 84 cows
Capital Investment (end of year)				
Livestock	$ 39,803	$ 58,991	$ 81,180	$100,136
Feed & supplies	11,239	17,653	26,056	34,432
Machinery & equipment	40,402	53,984	76,669	97,951
Land & buildings	120,967	142,160	193,710	225,287
TOTAL INVESTMENT	$212,411	$272,788	$377,615	$457,806
Receipts				
Milk sales	$ 58,562	$ 89,405	$123,086	$155,027
Dairy cattle sold	4,531	5,287	8,630	10,295
Other livestock sales	1,004	1,626	2,110	1,890
Crop sales	425	738	1,411	2,271
Miscellaneous receipts	3,791	3,991	5,448	5,640
Total Cash Receipts	$ 68,313	$101,047	$140,685	$175,123
Increase in livestock	-589	687	889	3,018
Increase in feed & supplies	501	10	2,085	435
Appreciation	1,609	3,371	6,243	5,188
TOTAL FARM RECEIPTS	$ 69,834	$105,115	$149,902	$183,764
TOTAL FARM REC. EXCL. APPREC.	$ 68,225	$101,744	$143,659	$178,576
Expenses				
Hired labor	$ 2,503	$ 5,326	$ 8,539	$ 13,584
Dairy grain & concentrate	16,993	23,274	30,095	36,692
Other feed	1,632	1,422	2,227	1,486
Machine hire	764	949	1,494	1,501
Machinery repair	3,072	4,013	5,929	7,527
Auto expense (farm share)	446	415	502	485
Gas & oil	2,072	3,157	4,494	6,131
Replacement animals	549	766	1,692	1,116
Breeding fees	875	1,238	2,062	2,548
Veterinary & medicine	1,072	1,617	2,641	3,098
Milk marketing	4,893	7,345	9,676	12,223
Cattle lease	0	55	87	125
Other livestock expense	2,362	3,650	5,511	6,278
Fertilizer & lime	2,355	3,446	6,291	8,000
Seeds & plants	697	1,081	1,933	2,602
Spray & other crop expense	693	813	1,438	1,988
Land, bldg., fence repair	936	1,190	1,971	2,339
Taxes & insurance	3,292	4,120	5,922	7,203
Electricity & phone (farm share)	2,018	2,879	3,875	4,700
Interest paid	5,789	9,300	12,660	14,845
Misc. expenses (including rent)	1,441	3,088	4,125	5,609
Total Cash Expenses	$ 54,454	$ 79,144	$113,164	$140,080
Expansion livestock	60	238	702	1,062
Machinery depreciation	6,475	7,623	11,531	15,287
Building depreciation	2,001	3,166	5,605	5,742
Unpaid family labor	1,844	1,750	1,821	1,805
Interest on equity @ 5%	7,433	9,162	12,678	15,771
TOTAL FARM EXPENSES	$ 72,267	$101,083	$145,501	$179,747
Financial Summary				
NET CASH FARM INCOME	$13,859	$21,903	$27,521	$35,043
Labor & Management Income	$-4,042	$661	$-1,842	$-1,171
Number of Operators	1.07	1.18	1.32	1.34
LABOR & MGT. INCOME/OPER.	$-3,778	$560	$-1,395	$-874
LABOR, MGT. & OWNSHP. INC./OPER.	$4,673	$11,181	$12,939	$14,767

Table 43 continued — FARM BUSINESS SUMMARY BY HERD SIZE
458 New York Dairy Farms, 1984

Item	Farms with: 85 to 99 cows	100 to 149 cows	150 to 199 cows	200 to 249 cows	250 or more cows
Capital Investment (end of year)					
Livestock	$124,747	$166,776	$223,343	$ 317,993	$ 470,722
Feed & supplies	41,199	60,934	81,393	113,736	189,321
Machinery & equipment	111,838	134,403	183,205	190,946	259,528
Land & buildings	242,050	348,070	415,970	581,058	879,980
TOTAL INVESTMENT	$519,834	$710,183	$903,911	$1,203,733	$1,799,551
Receipts					
Milk sales	$189,618	$256,245	$343,599	$505,975	$ 838,467
Dairy cattle sold	12,783	16,560	24,102	37,420	48,329
Other livestock sales	2,448	3,855	5,448	8,275	9,101
Crop sales	1,066	2,528	5,851	4,013	14,125
Miscellaneous receipts	4,509	9,564	18,177	19,824	11,764
Total Cash Receipts	$210,424	$288,752	$397,177	$575,507	$ 921,786
Increase in livestock	5,264	2,971	7,534	4,471	51,943
Increase in feed & supplies	281	7,022	6,856	4,218	14,687
Appreciation	2,746	10,566	11,658	24,903	12,861
TOTAL FARM RECEIPTS	$218,715	$309,311	$423,225	$609,099	$1,001,277
TOT. FARM REC. EXCL. APPREC.	$215,969	$298,745	$411,567	$584,196	$988,416
Expenses					
Hired labor	$ 16,688	$ 27,852	$ 46,503	$ 77,411	$117,236
Dairy feed & concentrate	49,523	61,297	78,388	115,416	201,481
Other feed	1,616	3,305	3,705	4,065	10,626
Machine hire	1,049	1,539	2,704	3,679	4,676
Machinery repair	10,347	14,395	20,231	27,963	38,467
Auto expense (farm share)	608	307	534	696	329
Gas & oil	7,220	10,651	13,739	19,720	24,792
Replacement animals	1,045	1,673	4,834	1,189	1,354
Breeding fees	2,715	3,811	5,028	8,061	12,013
Veterinary & medicine	3,776	5,339	6,729	12,980	20,847
Milk marketing	15,285	19,404	26,629	39,971	52,277
Cattle lease	150	104	0	0	732
Other livestock expense	8,091	9,643	15,299	17,745	32,245
Fertilizer & lime	9,363	13,360	21,445	26,273	32,100
Seeds & plants	3,122	4,101	7,169	9,889	12,436
Spray & other crop expense	2,126	4,726	7,328	6,131	15,530
Land, bldg., fence repair	2,697	3,860	3,746	6,384	9,185
Taxes & insurance	7,346	10,300	13,188	16,264	18,689
Elec. & phone (farm share)	5,464	6,851	8,877	11,927	15,604
Interest paid	19,120	27,319	39,003	50,300	87,833
Misc. expenses (incl. rent)	5,312	8,375	10,210	20,000	23,600
Total Cash Expenses	$172,663	$238,212	$335,289	$476,064	$732,052
Expansion livestock	1,040	729	3,596	7,173	20,888
Machinery depreciation	16,720	21,513	29,514	32,577	48,605
Building depreciation	7,497	10,826	11,453	22,077	31,860
Unpaid family labor	1,698	1,348	760	938	1,433
Interest on equity @ 5%	16,884	22,692	29,569	38,653	59,533
TOTAL FARM EXPENSES	$216,502	$295,320	$410,181	$577,482	$894,371
Financial Summary					
NET CASH FARM INCOME	$37,761	$50,540	$61,888	$99,443	$189,734
Labor & Management Income	$-533	$3,425	$1,386	$6,714	$94,045
Number of Operators	1.37	1.41	1.52	1.44	1.80
LABOR & MGT. INCOME/OPER.	$-389	$2,429	$912	$4,663	$52,247
LABOR, MGT. & OWNSHP. INC/OP.	$13,939	$26,016	$28,035	$48,799	$92,466

Table 44. SELECTED BUSINESS FACTORS BY HERD SIZE
458 New York Dairy Farms, 1984

Item	Farms with: Less than 40 cows	40 to 54 cows	55 to 69 cows	70 to 84 cows
Number of farms	45	100	94	64
Size of Business				
Number of cows	33	47	61	77
Number of heifers	27	38	52	67
Pounds of milk sold	443,000	664,700	919,900	1,159,400
Worker equivalent	1.75	2.08	2.50	2.92
Total work units	366	526	694	870
Total tillable acres	112	164	213	271
(Tillable acres rented)*	(26)	(50)	(71)	(80)
Rates of Production				
Milk sold per cow	13,424	14,143	15,080	15,057
Tons hay crop dry matter per acre	2.2	2.3	2.4	2.7
Tons corn silage per acre	12.9	13.0	12.8	12.9
Bushels of oats per acre	39.8	51.7	56.8	49.5
Labor Efficiency				
Cows per worker	19	23	24	26
Pounds milk sold per worker	253,143	319,567	367,960	397,055
Work units per worker	209	253	278	298
Feed Costs				
Feed purchased per cow	$515	$495	$493	$477
Crop expense per cow	$113	$114	$158	$164
Feed cost per cwt. milk	$3.84	$3.50	$3.27	$3.16
Feed & crop exp. per cwt. milk	$5.05	$4.52	$4.56	$4.38
% feed is of milk receipts	29%	26%	24%	24%
Tons forage dry matter per cow	7.6	7.7	7.8	8.0
Tillable acres per cow	3.4	3.5	3.5	3.5
Fertilizer & lime per crop acre	$21	$21	$30	$30
Machinery & Labor Costs				
Total machinery costs	$14,820	$18,829	$27,749	$35,813
Machinery cost per cow	$449	$401	$455	$465
Machinery cost per cwt. milk	$3.35	$2.83	$3.02	$3.09
Labor cost per cow	$425	$376	$364	$358
Labor cost per cwt. milk	$3.17	$2.66	$2.42	$2.38
Capital Efficiency				
Investment per worker	$121,378	$131,148	$151,046	$156,783
Investment per cow	$6,247	$5,683	$6,190	$5,795
Investment per cwt. milk	$48	$41	$41	$39
Land & buildings per cow	$3,558	$2,962	$3,176	$2,852
Machinery investment per cow	$1,188	$1,125	$1,257	$1,240
Capital turnover	3.0	2.6	2.5	2.5
Other				
Price per cwt. milk sold	$13.22	$13.45	$13.38	$13.37
Acres hay crops*	77	104	125	140
Acres corn silage*	17	28	41	53

*Average of all farms.

Table 44 continued — SELECTED BUSINESS FACTORS BY HERD SIZE
458 New York Dairy Farms, 1984

Item	Farms with: 85 to 99 cows	100 to 149 cows	150 to 199 cows	200 to 249 cows	250 or more cows
Number of farms	43	56	25	16	15
Size of Business					
Number of cows	91	124	170	229	359
Number of heifers	83	111	134	200	285
Pounds of milk sold	1,399,400	1,878,500	2,553,000	3,692,600	6,247,600
Worker equivalent	3.08	3.92	4.67	6.17	8.58
Total work units	1,030	1,398	1,907	2,541	3,801
Total tillable acres	290	383	549	622	790
(Tillable acres rented)*	(101)	(136)	(220)	(222)	(260)
Rates of Production					
Milk sold per cow	15,378	15,149	15,018	16,125	17,403
Tons hay crop dry matter/acre	2.7	2.9	3.0	3.3	4.0
Tons corn silage per acre	13.4	13.8	14.4	15.4	16.3
Bushels of oats per acre	53.0	45.8	50.1	57.1	80.0
Labor Efficiency					
Cows per worker	30	32	36	37	42
Pounds milk sold per worker	454,351	479,209	546,681	598,476	728,159
Work units per worker	334	357	408	412	443
Feed Costs					
Feed purchased per cow	$544	$494	$461	$504	$561
Crop expense per cow	$161	$179	$211	$185	$167
Feed cost per cwt. milk	$3.54	$3.26	$3.07	$3.13	$3.22
Feed & crop exp. per cwt. milk	$4.70	$4.62	$4.62	$4.38	$4.36
% feed is of milk receipts	26%	24%	23%	23%	24%
Tons forage dry matter per cow	8.1	8.0	8.7	8.5	8.0
Tillable acres per cow	3.2	3.1	3.2	2.7	2.2
Fertilizer & lime per crop acre	$32	$35	$39	$42	$41
Machinery & Labor Costs					
Total machinery costs	$41,499	$54,991	$75,651	$94,090	$129,309
Machinery cost per cow	$456	$443	$445	$411	$360
Machinery cost per cwt. milk	$2.97	$2.93	$2.96	$2.55	$2.07
Labor cost per cow	$337	$338	$360	$399	$375
Labor cost per cwt. milk	$2.19	$2.23	$2.39	$2.47	$2.15
Capital Efficiency					
Investment per worker	$168,777	$181,169	$193,557	$195,094	$209,738
Investment per cow	$5,590	$5,636	$5,165	$5,144	$4,699
Investment per cwt. milk	$37	$38	$35	$33	$29
Land & buildings per cow	$2,603	$2,762	$2,377	$2,483	$2,298
Machinery investment per cow	$1,203	$1,067	$1,047	$816	$678
Capital turnover	2.4	2.3	2.1	2.0	1.8
Other					
Price per cwt. milk sold	$13.55	$13.64	$13.46	$13.70	$13.42
Acres hay crops*	154	176	258	237	245
Acres corn silage*	71	102	144	235	326

*Average of all farms.

Table 45. FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
458 New York Dairy Farms, January 1, 1985

Item — Farms with:	Less than 40 cows	40 to 54 cows	55 to 69 cows	70 to 84 cows	85 to 99 cows
Number of farms	45	100	94	64	43
Assets					
Livestock (includes	$ 39,803	$ 59,013	$ 81,180	$100,161	$124,747
discounted lease payments)	(0)	(22)	(0)	(25)	(0)
Feed & supplies	11,239	17,653	26,056	34,432	41,199
Machinery & equipment (includes	40,617	55,212	77,650	98,722	112,637
discounted lease payments)	(215)	(1,228)	(981)	(771)	(799)
Land & buildings (includes	121,575	144,453	194,790	227,936	246,366
discounted lease payments)	(608)	(2,293)	(1,080)	(2,649)	(4,316)
Co-op investment	950	2,842	3,971	4,747	7,902
Accounts receivable	5,903	8,170	11,281	14,229	17,314
Cash & checking accounts	1,084	1,664	2,028	3,492	2,463
Total Farm Assets	$221,171	$289,007	$396,956	$483,719	$552,628
Savings accounts	2,892	3,025	2,751	4,773	3,694
Cash value life insurance	2,071	2,119	3,115	2,670	1,908
Stocks & bonds	990	2,082	2,195	3,755	2,155
Nonfarm real estate	3,853	2,905	8,897	5,656	3,616
Auto (personal share)	1,464	1,903	2,005	1,806	1,979
All other	7,871	9,212	6,298	6,887	5,231
Total Nonfarm Assets	$ 19,141	$ 21,246	$ 25,261	$ 25,547	$ 18,583
TOTAL ASSETS	$240,312	$310,253	$422,217	$509,266	$571,211
Liabilities					
Long term	$ 48,126	$ 61,437	$ 80,274	$ 97,144	$130,575
Intermediate	20,644	35,075	54,202	59,859	68,539
Financial lease	823	3,543	2,061	3,445	5,115
Short-term	500	2,191	2,547	2,059	5,511
Other farm accounts	2,414	3,526	4,311	5,789	5,209
Total Farm Liabilities	$ 72,507	$105,772	$143,395	$168,296	$214,949
Total Nonfarm Liabilities	190	830	856	1,816	570
TOTAL LIABILITIES	$ 72,697	$106,602	$144,251	$170,112	$215,519
Farm Net Worth (Eq. Cap.)	$148,664	$183,235	$253,561	$315,423	$337,679
FAMILY NET WORTH	$167,615	$203,651	$277,966	$339,154	$355,692
Financial Measures					
Percent equity	70%	66%	66%	67%	62%
Farm debt per cow	$2,133	$2,204	$2,351	$2,130	$2,311
Available for debt service & living	$22,264	$33,907	$43,287	$50,678	$57,557
Scheduled annual debt payment	$13,695	$21,704	$29,930	$35,772	$45,664
Scheduled debt payments/cow	$398	$447	$486	$450	$487
Payment as % of milk check	23%	24%	24%	23%	24%
Debt/Asset ratio - long term	0.40	0.43	0.41	0.43	0.53
Debt/Asset ratio - intermediate & short-term	0.22	0.28	0.29	0.26	0.26
Cash flow coverage ratio	0.57	0.78	0.78	0.81	0.75

Table 45 continued — FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
458 New York Dairy Farms, January 1, 1985

Item	100 to 149 cows	150 to 199 cows	200 to 249 cows	250 or more cows
Number of farms	56	25	16	15
Assets				
Livestock (includes discounted	$166,776	$ 223,343	$ 317,993	$ 470,722
lease payments)	(0)	(0)	(0)	(0)
Feed & supplies	60,934	81,393	113,736	189,321
Machinery & equipment (includes	135,106	184,455	196,961	260,222
discounted lease payments)	(703)	(1,250)	(6,015)	(694)
Land & buildings (includes	348,754	415,970	581,058	879,980
discounted lease payments)	(684)	(0)	(0)	(0)
Co-op investment	14,180	28,568	32,536	41,442
Accounts receivable	23,033	31,420	50,181	76,619
Cash & checking accounts	5,401	4,236	9,117	6,807
Total Farm Assets	$754,184	$ 969,385	$1,301,582	$1,925,113
Savings accounts	3,921	8,721	3,796	9,126
Cash value life insurance	3,560	6,789	3,796	9,126
Stocks & bonds	5,664	8,108	2,455	4,079
Nonfarm real estate	7,632	13,880	0	6,867
Auto (personal share)	1,817	3,173	1,063	667
All other	8,148	7,340	7,019	4,411
Total Nonfarm Assets	$ 30,742	$ 48,000	$ 16,029	$ 27,500
TOTAL ASSETS	$784,926	$1,017,385	$1,317,611	$1,952,613
Liabilities				
Long term	$164,375	$218,110	$272,541	$399,185
Intermediate	116,134	135,883	228,449	298,210
Financial Lease	1,387	1,250	6,015	694
Short-term	7,550	10,275	5,801	13,752
Other farm accounts	10,893	12,494	15,708	22,605
Total Farm Liabilities	$300,339	$378,012	$528,514	$734,446
Total Nonfarm Liabilities	742	1,578	250	400
TOTAL LIABILITIES	$301,081	$379,590	$528,764	$734,846
Farm Net Worth (Equity Cap.)	$453,845	$591,373	$773,068	$1,190,667
FAMILY NET WORTH	$483,845	$637,795	$788,847	$1,217,767
Financial Measures				
Percent equity	62%	63%	60%	62%
Farm debt per cow	$2,384	$2,160	$2,259	$1,918
Available for debt service & living	$79,761	$103,180	$150,134	$277,674
Scheduled annual debt payment	$67,136	$92,504	$118,968	$186,887
Scheduled debt payment/cow	$531	$526	$508	$488
Payment as % of milk check	26%	27%	34%	22%
Debt/Asset ratio - long term	0.47	0.52	0.47	0.45
Debt/Asset ratio - intermediate & short-term	0.31	0.27	0.33	0.30
Cash flow coverage ratio	0.78	0.76	0.94	1.18

Table 46. SELECTED BUSINESS FACTORS BY HERD SIZE
163 Freestall Barn Dairy Farms, New York, 1984

Item	Farms with: Less than 55 cows	55 to 69 cows	70 to 99 cows	100 to 149 cows	150 or more cows
Number of farms	6	19	41	45	52
Size of Business					
Number of cows	46	62	85	127	242
Number of heifers	46	54	78	115	195
Milk sold (cwt.)	6,452	9,430	12,764	19,045	39,622
Worker equivalent	2.17	2.42	2.92	3.92	6.25
Total tillable acres	204	251	286	391	638
Number of operators	1.3	1.3	1.4	1.4	1.5
Rates of Production					
Milk sold per cow (lbs.)	14,026	15,210	15,016	14,996	16,373
Tons hay crop dry matter/acre	2.7	2.6	2.5	2.8	3.4
Tons corn silage per acre	11.8	11.9	12.8	13.8	15.4
Labor Efficiency					
Cows per worker	21	26	29	32	39
Milk sold per worker (lbs.)	297,327	389,669	437,123	485,842	633,952
Feed Costs					
Feed purchased per cow	$506	$465	$535	$490	$518
Crop expense per cow	$143	$191	$158	$180	$185
Feed cost per cwt. milk	$3.61	$3.06	$3.56	$3.27	$3.16
Feed & crop exp. per cwt. milk	$4.81	$4.64	$4.77	$4.66	$4.43
% feed is of milk receipts	27%	23%	26%	24%	23%
Tons forage dry matter per cow	8.5	9.8	7.8	8.0	8.3
Tillable acres per cow	4.4	4.0	3.4	3.1	2.6
Fertilizer & lime per crop acre	$18	$32	$30	$36	$40
Machinery & Labor Costs					
Machinery cost per cow	$558	$533	$494	$439	$406
Machinery cost per cwt. milk	$3.98	$3.50	$3.29	$2.93	$2.48
Labor cost per cow	$452	$364	$333	$331	$380
Labor cost per cwt. milk	$3.22	$2.39	$2.22	$2.21	$2.32
Labor & mach. cost/cwt. milk	$7.20	$5.89	$5.51	$5.14	$4.80
Capital Efficiency					
Investment per worker	$122,049	$157,380	$166,063	$180,077	$201,770
Investment per cow	$5,758	$6,045	$5,510	$5,430	4,984
Land & buildings per cow	$2,710	$3,106	$2,548	$2,630	$2,391
Machinery investment per cow	$1,290	$1,311	$1,230	$1,031	$834
Capital turnover	2.2	2.3	2.3	2.2	1.9
Income & Financial Measures					
Price per cwt. milk sold	$13.12	$13.38	$13.63	$13.64	$13.52
Net cash farm income	$25,162	$28,351	$39,016	$51,858	$108,305
Labor & mgmt. income/operator	$2,471	-$906	$517	$3,775	$17,851
Labor, mgmt. & ownership income/operator	$12,823	$14,819	$15,289	$27,857	$56,049
Farm debt per cow	$2,392	$2,601	$2,230	$2,536	$2,127
Cash flow coverage ratio	0.78	0.70	0.80	0.78	0.97

Table 47. SELECTED BUSINESS FACTORS BY HERD SIZE
295 Conventional Stall Barn Dairy Farms, New York, 1984

Item	Farms with: Less than 55 cows	55 to 69 cows	70 to 99 cows	100 to 149 cows	150 or more cows
Number of farms	139	75	66	11	4
Size of Business					
Number of cows	42	61	81	112	181
Number of heifers	34	51	70	94	173
Milk sold (cwt.)	5,937	9,140	12,431	17,720	26,460
Worker equivalent	2.00	2.50	3.08	4.00	5.67
Total tillable acres	146	204	274	352	587
Number of operators	1.1	1.3	1.3	1.6	2.3
Rates of Production					
Milk sold per cow (lbs.)	14,136	14,984	15,347	15,821	14,619
Tons hay crop dry matter/acre	2.2	2.3	2.8	3.1	2.9
Tons corn silage per acre	12.8	13.4	13.5	13.9	17.3
Labor Efficiency					
Cows per worker	21	24	26	28	32
Milk sold per worker (lbs.)	296,850	365,600	403,604	443,000	466,667
Feed Costs					
Feed purchased per cow	$506	$499	$489	$513	$433
Crop expense per cow	$114	$149	$165	$175	$213
Feed cost per cwt. milk	$3.58	$3.33	$3.19	$3.24	$2.96
Feed & crop exp. per cwt. milk	$4.63	$4.54	$4.37	$4.44	$4.71
% feed is of milk receipts	27%	25%	24%	24%	22%
Tons forage dry matter per cow	7.7	7.3	8.3	8.1	9.1
Tillable acres per cow	3.5	3.3	3.4	3.1	3.2
Fertilizer & lime per crop acre	$21	$29	$31	$31	$45
Machinery & Labor Costs					
Machinery cost per cow	$410	$433	$440	$465	$319
Machinery cost per cwt. milk	$2.90	$2.89	$2.87	$2.94	$2.18
Labor cost per cow	$390	$363	$359	$370	$308
Labor cost per cwt. milk	$2.76	$2.42	$2.34	$2.34	$2.11
Labor & mach. cost/cwt. milk	$5.66	$5.31	$5.21	$5.28	$4.29
Capital Efficiency					
Investment per worker	$126,792	$150,717	$156,293	$181,925	$144,429
Investment per cow	$5,897	$6,177	$5,800	$6,440	4,500
Land & buildings per cow	$3,164	$3,167	$2,854	$3,304	$1,984
Machinery investment per cow	$1,148	$1,232	$1,212	$1,201	$755
Capital turnover	2.7	2.6	2.5	2.5	2.0
Income & Financial Measures					
Price per cwt. milk sold	$13.41	$13.38	$13.34	$13.63	$13.29
Net cash farm income	$19,157	$27,309	$34,349	$45,147	$88,090
Labor & mgmt. income/operator	$-859	$-1,520	$-1,464	$-2,179	$15,742
Labor, mgmt. & ownership income/operator	$9,097	$12,537	$13,819	$19,363	$28,448
Farm debt per cow	$2,205	$2,266	$2,185	$1,595	$1,298
Cash flow coverage ratio	0.73	0.80	0.77	0.82	1.34

Table 48. SELECTED BUSINESS FACTORS BY MILKING SYSTEMS
458 New York Dairy Farms, 1984

Item	Bucket and Carry	Dumping Station	Pipe-line	Herring-bone Parlor	Other Parlors
Number of farms	7	66	220	142	23
Percent of farms	2%	14%	48%	31%	5%
Capital Investment (end of year)					
Livestock	$ 37,041	$ 53,692	$ 86,576	$194,847	$158,594
Feed & supplies	10,104	16,191	28,596	71,931	50,325
Machinery & equipment	32,056	49,381	78,280	149,629	113,201
Land & buildings	141,929	129,156	200,623	388,103	274,651
TOTAL INVESTMENT	$221,130	$248,420	$394,075	$804,510	$596,771
Financial Summary					
Total farm rec. excl. apprec.	$ 67,745	$ 91,325	$150,484	$370,673	$278,882
Total farm expenses	71,657	91,260	151,697	360,465	270,298
Labor & Management Income	$ -3,912	$ 65	$ -1,213	$ 10,208	$ 8,584
Number of operators	1.00	1.23	1.27	1.40	1.57
LABOR & MANAGEMENT INCOME PER OPERATOR	$ -3,912	$ 53	$ -955	$ 7,291	$ 5,468
Size of Business					
Number of cows	37	47	64	147	112
Number of heifers	31	37	55	125	99
Pounds of milk sold	465,600	601,000	982,900	2,317,200	1,775,600
Worker equivalent	1.67	2.17	2.50	4.25	3.83
Crop acres	110	171	213	434	332
Rates of Production					
Milk sold per cow (lbs.)	12,584	12,787	15,358	15,763	15,854
Tons hay crop dry matter/acre	1.6	2.1	2.6	3.0	2.8
Tons corn silage per acre	11.1	12.4	13.6	14.5	14.5
Labor Efficiency					
Cows per worker	22	22	26	35	29
Lbs. milk sold per worker	278,802	276,959	393,160	545,224	463,603
Costs					
Feed purchased per cow	$574	$456	$504	$511	$521
% feed is of milk receipts	35%	27%	24%	24%	24%
Machinery cost per cow	$302	$366	$437	$438	$445
Labor cost per cow	$349	$378	$367	$361	$373
Capital Efficiency					
Investment per worker	$132,413	$114,479	$157,630	$189,296	$155,815
Investment per cow	$5,976	$5,175	$6,063	$5,258	$5,189
Land & buildings per cow	$3,836	$2,691	$3,087	$2,537	$2,388
Machinery investment per cow	$866	$1,029	$1,204	$978	$984
Other					
Price per cwt. milk sold	$13.08	$13.20	$13.43	$13.54	$13.66

Table 49.

FARM BUSINESS SUMMARIES FOR INDIVIDUALS, PARTNERSHIPS, AND CORPORATIONS
457 New York Dairy Farms, 1984

Item	Averages for: 329 Individuals		113 Partnerships		15 Corporations	
CAPITAL INVESTMENT	1/1/84	1/1/85	1/1/84	1/1/85	1/1/84	1/1/85
Livestock	$100,247	$100,752	$155,363	$155,860	$236,723	$223,546
Feed & supplies	31,261	33,621	53,342	56,056	90,988	93,187
Mach. & equipment	82,352	84,821	116,580	120,549	195,915	199,228
Land & buildings	210,602	217,269	315,274	322,913	456,226	461,779
TOTAL INVESTMENT	$424,462	$436,463	$640,559	$655,378	$979,852	$977,740
EXPENSES						
Hired Labor	$ 16,953		$ 20,597		$ 55,750	
Feed						
Dairy grain & conc.	39,853		55,024		86,678	
Hay & other	2,406		2,398		1,689	
Machinery						
Machine hire	1,403		1,657		2,983	
Machinery repair	7,913		12,554		21,820	
Auto expense	481		396		612	
Gas & oil	5,876		8,761		15,515	
Livestock						
Replacement livestock	1,338		1,504		1,367	
Breeding fees	2,340		3,786		5,727	
Veterinary & medicine	3,243		5,455		8,207	
Milk marketing	12,371		16,674		34,428	
Cattle lease	126		31		0	
Other livestock expense	6,343		9,967		14,165	
Crops						
Fertilizer & lime	7,223		12,593		22,872	
Seeds & plants	2,488		4,050		6,569	
Spray & other	2,075		3,890		8,173	
Real Estate						
Land, bldg., fence repair	2,207		3,254		4,511	
Taxes	3,871		5,516		10,285	
Insurance	2,412		3,403		6,868	
Rent	2,965		4,966		6,867	
Other						
Telephone (farm share)	573		643		1,002	
Elec. (farm share)	3,790		5,623		9,836	
Interest paid	16,758		24,802		30,545	
Miscellaneous	2,048		3,071		4,901	
Total Cash Expenses	$147,056		$210,615		$361,370	
Expansion livestock	1,252		2,831		2,151	
Machinery depreciation	13,095		19,459		34,441	
Building depreciation	6,498		8,702		14,676	
Unpaid labor ($500/mo.)	1,878		1,080		300	
Interest on farm equity @ 5 percent	14,114		22,026		37,078	
TOTAL FARM EXPENSES	$183,893		$264,713		$450,016	

Table 49 continued
FARM BUSINESS SUMMARIES FOR INDIVIDUALS, PARTNERSHIPS, AND CORPORATIONS
457 New York Dairy Farms, 1984

Item	Averages for: 329 Individuals	113 Partnerships	15 Corporations
RECEIPTS			
Milk sales	$156,672	$240,656	$399,321
Crop sales	1,499	3,588	5,472
Dairy cattle sold	9,926	16,506	31,671
Other livestock sales	2,499	3,115	4,808
Gas tax refund	174	202	567
Government payments	2,704	4,116	6,761
Custom machine work	220	625	905
Miscellaneous	2,802	3,350	7,857
Total Cash Receipts	$176,496	$272,158	$457,362
Increase in livestock	3,530	5,988	-5,845
Increase in feed & supplies	2,360	2,714	2,199
Appreciation	6,720	4,858	10,379
TOTAL FARM RECEIPTS	$189,106	$285,718	$464,095
TOTAL FARM RECEIPTS EXCLUDING APPRECIATION	$182,386	$280,860	$453,716
FINANCIAL SUMMARY			
Total Cash Receipts	$176,496	$272,158	$457,362
Total Cash Expenses	147,056	210,615	361,370
NET CASH FARM INCOME	$ 29,440	$ 61,543	$ 95,992
Total Farm Receipts Excluding Appreciation	$182,386	$280,860	$453,716
Total Farm Expenses	183,893	264,713	450,016
LABOR & MGMT. INCOME PER FARM	$ -1,507	$ 16,147	$ 3,700
Number of Operators	(348) 1.05	(230) 2.04	(27) 1.73
LABOR & MGMT. INCOME PER OPER.	$ -1,435	$ 7,915	$ 2,139
BUSINESS FACTORS			
Worker equivalent	2.75	3.67	5.08
Number of cows	78	113	175
Number of heifers	65	97	153
Acres of hay crops*	133	159	206
Acres of corn silage*	59	92	149
Total tillable acres	247	350	481
Pounds of milk sold	1,164,400	1,788,100	2,874,800
Pounds of milk sold per cow	14,928	15,824	16,427
Tons hay crop dry matter per acre	2.6	2.8	3.7
Tons corn silage per acre	13.8	14.4	15.1
Cows per worker	28	31	34
Lbs. of milk sold per worker	423,418	487,221	565,906
% feed is of milk receipts	25%	23%	22%
Feed & crop expense per cwt. milk	$4.64	$4.36	$4.38
Fertilizer & lime per crop acre	$29	$36	$48
Machinery cost per cow	$422	$431	$487
Average price per cwt. milk	$13.46	$13.46	$13.89

*Average of all farms.

Table 50. COMPARISON OF FARM BUSINESS SUMMARIES FOR 1983 & 1984
Same 343 New York Dairy Farms

Item	Averages 1983		Averages 1984	
CAPITAL INVESTMENT	1/1/83	1/1/84	1/1/84	1/1/85
Livestock	$127,965	$121,125	$121,400	$121,252
Feed & supplies	35,251	38,686	38,922	41,304
Machinery & equipment	92,117	95,344	95,975	98,641
Land & buildings	239,781	245,948	246,278	253,178
TOTAL INVESTMENT	$495,114	$501,103*	$502,575*	$514,375
EXPENSES				
Hired Labor	$ 17,879		$ 19,339	
Feed				
Dairy grain & concentrate	47,351		47,148	
Hay & other	2,447		2,430	
Machinery				
Machine hire	1,447		1,391	
Machinery repair	9,342		9,644	
Auto expense	511		473	
Gas & oil	6,608		6,917	
Livestock				
Replacement livestock	2,074		1,492	
Breeding fees	2,771		2,964	
Veterinary & medicine	4,063		4,069	
Milk marketing	12,435		14,271	
Cattle lease	93		96	
Other livestock expense	7,429		7,742	
Crops				
Fertilizer & lime	8,379		8,840	
Seeds & plants	2,884		2,991	
Spray & other	2,597		2,786	
Real Estate				
Land, building, fence repair	2,543		2,499	
Taxes	4,515		4,484	
Insurance	2,799		2,800	
Rent	3,097		3,357	
Other				
Telephone (farm share)	600		610	
Electricity (farm share)	4,201		4,466	
Interest paid	18,610		19,229	
Miscellaneous	2,379		2,445	
Total Cash Expenses	$167,054		$172,483	
Expansion livestock	1,162		1,896	
Machinery depreciation	14,809		15,528	
Building depreciation	6,839		7,422	
Unpaid labor @ $500 per month	1,552		1,641	
Interest on farm equity @ 5%	16,751		17,195	
TOTAL FARM EXPENSES	$208,167		$216,165	

*Operators often make adjustments in values "between" years.

Table 50
continued COMPARISON OF FARM BUSINESS SUMMARIES FOR 1983 & 1984
Same 343 New York Dairy Farms

Item	Averages 1983	Averages 1984
RECEIPTS		
Milk sales	$187,826	$189,166
Crop sales	1,731	1,904
Dairy cattle sold	11,445	12,517
Other livestock sales	2,760	2,694
Gas tax refund	171	176
Government payments	1,500	3,109
Custom machine work	303	305
Miscellaneous	2,900	3,287
Total Cash Receipts	$208,636	$213,158
Increase in livestock	4,663	4,399
Increase in feed & supplies	3,435	2,382
Appreciation	-2,289	5,367
TOTAL FARM RECEIPTS	$214,445	$225,306
TOTAL FARM RECEIPTS EXCLUDING APPRECIATION	$216,734	$219,939
FINANCIAL SUMMARY		
Net Cash Farm Income	$ 41,582	$ 40,675
Labor, Management & Ownership Income Per Farm	$ 23,029	$ 26,336
Number of Operators	(455) 1.32	(460) 1.32
Labor, Management & Ownership Income Per Operator	$ 17,446	$ 19,952
Labor & Management Income Per Farm	$ 8,567	$ 3,774
Labor & Management Income Per Operator	$ 6,490	$ 2,859
Rate of Return on Equity Capital Including Appreciation	0.6%	1.4%
BUSINESS FACTORS		
Worker equivalent	3.08	3.08
Number of cows	89	91
Number of heifers	74	78
Acres of hay crops*	136	141
Acres of corn silage*	64	71
Total tillable acres	266	274
Pounds of milk sold	1,379,500	1,406,200
Pounds of milk sold per cow	15,500	15,453
Tons hay crop dry matter per acre	2.6	2.7
Tons corn silage per acre	13.8	14.2
Cows per worker	29	30
Pounds milk sold per worker	447,890	456,558
Percent feed is of milk receipts	25%	25%
Feed & crop expense per cwt. milk	$4.61	$4.57
Fertilizer & lime per crop acre	$32	$32
Machinery cost per cow	$420	$427
Average price per cwt. milk	$13.62	$13.45

*Average of all farms.

Table 51. FARM BUSINESS SUMMARY
33 New York Dairy-Cash Crop Farms,[1] 1984

CAPITAL INVESTMENT	1/1/84	1/1/85
Livestock	$118,255	$114,614
Feed & supplies	61,470	64,295
Machinery & equipment	130,677	137,667
Land & buildings	303,596	310,272
TOTAL INVESTMENT	$613,998	$626,848

EXPENSES	
Labor	
Hired	$ 23,422
Feed	
Dairy grain & concentrate	28,400
Hay & other	3,233
Machinery	
Machine hire	4,681
Machinery repair	12,648
Auto expense	350
Gas & oil	9,117
Livestock	
Replacement livestock	2,164
Breeding fees	2,540
Veterinary & medicine	3,549
Milk marketing	12,256
Cattle lease	29
Other livestock expense	6,374
Crops	
Lime & fertilizer	12,511
Seeds & plants	4,749
Spray & other	4,997
Real Estate	
Land, building, fence repair	3,471
Taxes	5,334
Insurance	3,318
Rent	5,287
Other	
Telephone (farm share)	660
Electricity (farm share)	4,704
Interest paid	21,850
Miscellaneous	4,219
TOTAL CASH EXPENSES	$179,863
Expansion livestock	303
Machinery depreciation	23,467
Building depreciation	10,167
Unpaid labor	833
Interest on farm equity @ 5%	21,276
TOTAL FARM EXPENSES	$235,909

RECEIPTS	
Milk sales	$168,511
Crop sales	34,005
Dairy cattle sold	12,580
Livestock sales	4,606
Gas tax refund	204
Government payments	5,985
Custom machine work	1,306
Miscellaneous	7,471
TOTAL CASH RECEIPTS	$234,668
Increase in livestock	754
Increase in feed & supplies	2,825
Appreciation	15,534
TOTAL FARM RECEIPTS	$253,781
TOTAL FARM RECEIPTS EXCLUDING APPRECIATION	$238,247

FINANCIAL SUMMARY	
Net Cash Farm Income	$54,805
Labor, Management & Ownership Income Per Farm	$39,148
Number of Operators	1.52
Labor, Management & Ownership Income Per Operator	$25,755
Labor & Mgmt. Income Per Farm	$ 2,338
Labor & Mgmt. Income/Operator	$ 1,538
Rate of Return on Equity Capital Including Appreciation	3.4%

BUSINESS FACTORS	
Worker equivalent	3.33
Number of cows	84
Number of heifers	72
Acres of hay crops[2]	151
Acres of corn silage[2]	45
Total tillable acres	415
Pounds of milk sold	1,268,300
Pounds of milk sold per cow	15,099
Tons hay crop dry matter/acre	2.8
Tons corn silage per acre	14.3
Cows per worker	25
Lbs. of milk sold per worker	380,871
% feed is of milk receipts	17%
Feed & crop expense per cwt. milk	$4.25
Fertilizer & lime/tillable acre	$30
Machinery cost per cow	$678
Average price per cwt. milk	$13.29

[1] Farms where crop sales amounted to 10 percent or more of milk sales.
[2] Average of all farms.

Table 52. FARM BUSINESS SUMMARY
48 New York Dairy-Renter Farms,[1] 1984

CAPITAL INVESTMENT	1/1/84	1/1/85
Livestock	$ 75,942	$ 77,014
Feed & supplies	24,696	25,881
Machinery & equipment	58,932	60,258
Land & buildings	7,108	7,066
TOTAL INVESTMENT	$166,678	$170,219

EXPENSES	
Labor	
Hired	$ 9,458
Feed	
Dairy grain & concentrate	33,283
Hay & other	4,564
Machinery	
Machine hire	1,510
Machinery repair	5,905
Auto expense	297
Gas & oil	4,867
Livestock	
Replacement livestock	3,417
Breeding fees	1,793
Veterinary & medicine	2,590
Milk marketing	10,654
Cattle lease	375
Other livestock expense	5,481
Crops	
Lime & fertilizer	5,190
Seeds & plants	1,814
Spray & other	1,510
Real Estate	
Land, building, fence repair	1,616
Taxes	883
Insurance	1,834
Rent	12,049
Other	
Telephone (farm share)	472
Electricity (farm share)	3,034
Interest paid	7,439
Miscellaneous	1,571
TOTAL CASH EXPENSES	$121,606
Expansion livestock	891
Machinery depreciation	9,469
Building depreciation	579
Unpaid labor	1,625
Interest on farm equity @ 5%	5,703
TOTAL FARM EXPENSES	$139,873

RECEIPTS	
Milk sales	$129,770
Crop sales	2,927
Dairy cattle sold	7,418
Livestock sales	1,893
Gas tax refund	74
Government payments	2,104
Custom machine work	434
Miscellaneous	1,065
TOTAL CASH RECEIPTS	$145,685
Increase in livestock	3,873
Increase in feed & supplies	1,185
Appreciation	(1,430)
TOTAL FARM RECEIPTS	$149,313
TOTAL FARM RECEIPTS EXCLUDING APPRECIATION	$150,743

FINANCIAL SUMMARY	
Net Cash Farm Income	$24,079
Labor, Management & Ownership Income Per Farm	$15,143
Number of Operators	1.29
Labor, Management & Ownership Income Per Operator	$11,739
Labor & Mgmt. Income Per Farm	$10,870
Labor & Mgmt. Income/Operator	$8,426
Rate of Return on Equity Capital Including Appreciation	-4.6%

BUSINESS FACTORS	
Worker equivalent	2.17
Number of cows	65
Number of heifers	47
Acres of hay crops[2]	109
Acres of corn silage[2]	42
Total tillable acres	196
Pounds of milk sold	956,300
Pounds of milk sold per cow	14,712
Tons hay crop dry matter/acre	2.3
Tons corn silage per acre	13.4
Cows per worker	30
Lbs. of milk sold per worker	440,691
% feed is of milk receipts	26%
Feed & crop expense per cwt. milk	$4.85
Fertilizer & lime/tillable acre	$26
Machinery cost per cow	$385
Average price per cwt. milk	$13.57

[1] A farm was classified as a renter if no real estate was owned or if all tillable land was rented.
[2] Average of all farms.

Table 53. FARM BUSINESS SUMMARY
Top 10 Percent of the Farms by Labor & Management Income Per Operator
46 New York Dairy Farms, 1984

CAPITAL INVESTMENT

	1/1/84	1/1/85
Livestock	$227,794	$247,261
Feed & supplies	85,789	97,934
Machinery & equipment	138,198	147,322
Land & buildings	413,165	438,632
TOTAL INVESTMENT	$864,946	$931,149

EXPENSES

Labor	
Hired	$ 53,576
Feed	
Dairy grain & concentrate	100,767
Hay & other	3,340
Machinery	
Machine hire	3,370
Machinery repair	19,234
Auto expense	423
Gas & oil	12,739
Livestock	
Replacement livestock	1,827
Breeding fees	6,528
Veterinary & medicine	10,097
Milk marketing	27,358
Cattle lease	0
Other livestock expense	14,844
Crops	
Lime & fertilizer	18,342
Seeds & plants	6,759
Spray & other	6,771
Real Estate	
Land, building, fence repair	4,612
Taxes	7,279
Insurance	4,248
Rent	7,946
Other	
Telephone (farm share)	906
Electricity (farm share)	7,955
Interest paid	38,462
Miscellaneous	4,965
TOTAL CASH EXPENSES	$362,348
Expansion livestock	9,610
Machinery depreciation	25,257
Building depreciation	14,385
Unpaid labor	1,250
Interest on farm equity @ 5%	29,951
TOTAL FARM EXPENSES	$442,801

RECEIPTS

Milk sales	$412,493
Crop sales	6,149
Dairy cattle sold	25,677
Livestock sales	5,828
Gas tax refund	161
Government payments	4,186
Custom machine work	770
Miscellaneous	7,507
TOTAL CASH RECEIPTS	$462,771
Increase in livestock	27,338
Increase in feed & supplies	12,145
Appreciation	11,067
TOTAL FARM RECEIPTS	$513,321
TOTAL FARM RECEIPTS EXCLUDING APPRECIATION	$502,254

FINANCIAL SUMMARY

Net Cash Farm Income	$100,423
Labor, Management & Ownership Income Per Farm	$100,471
Number of Operators	1.35
Labor, Management & Ownership Income Per Operator	$74,423
Labor & Mgmt. Income Per Farm	$59,453
Labor & Mgmt. Income/Operator	$44,039
Rate of Return on Equity Capital Including Appreciation	12.2%

BUSINESS FACTORS

Worker equivalent	4.92
Number of cows	180
Number of heifers	150
Acres of hay crops*	180
Acres of corn silage*	176
Total tillable acres	475
Pounds of milk sold	3,077,800
Pounds of milk sold per cow	17,099
Tons hay crop dry matter/acre	3.3
Tons corn silage per acre	16.0
Cows per worker	37
Lbs. of milk sold per worker	625,569
% feed is of milk receipts	24%
Feed & crop expense per cwt. milk	$4.42
Fertilizer & lime/tillable acre	$39
Machinery cost per cow	$379
Average price per cwt. milk	$13.40

*Average of all farms.

Table 54. FARM BUSINESS SUMMARY
Average 458 New York Dairy Farms, 1984

CAPITAL INVESTMENT	1/1/84	1/1/85
Livestock	$118,212	$118,266
Feed & supplies	38,625	41,053
Machinery & equipment	94,431	97,284
Land & buildings	244,416	251,272
TOTAL INVESTMENT	$495,684	$507,875

EXPENSES	
Labor	
Hired	$ 19,114
Feed	
Dairy grain & concentrate	45,109
Hay & other	2,383
Machinery	
Machine hire	1,514
Machinery repair	9,519
Auto expense	464
Gas & oil	6,903
Livestock	
Replacement livestock	1,377
Breeding fees	2,806
Veterinary & medicine	3,944
Milk marketing	14,148
Cattle lease	98
Other livestock expense	7,487
Crops	
Lime & fertilizer	9,045
Seeds & plants	3,003
Spray & other	2,719
Real Estate	
Land, building, fence repair	2,537
Taxes	4,495
Insurance	2,799
Rent	3,603
Other	
Telephone (farm share)	604
Electricity (farm share)	4,438
Interest paid	19,170
Miscellaneous	2,395
TOTAL CASH EXPENSES	$169,674
Expansion livestock	1,668
Machinery depreciation	15,345
Building depreciation	7,308
Unpaid labor	1,635
Interest on farm equity @ 5%	16,811
TOTAL FARM EXPENSES	$212,441

RECEIPTS	
Milk sales	$185,226
Crop sales	2,141
Dairy cattle sold	12,240
Livestock sales	2,736
Gas tax refund	193
Government payments	3,180
Custom machine work	342
Miscellaneous	3,097
TOTAL CASH RECEIPTS	$209,155
Increase in livestock	3,821
Increase in feed & supplies	2,428
Appreciation	6,380
TOTAL FARM RECEIPTS	$221,784
TOTAL FARM RECEIPTS EXCLUDING APPRECIATION	$215,404

FINANCIAL SUMMARY	
Net Cash Farm Income	$39,481
Labor, Management & Ownership Income Per Farm	$26,154
Number of Operators (608)	1.31
Labor, Management & Ownership Income Per Operator	$19,965
Labor & Mgmt. Income Per Farm	2,963
Labor & Mgmt. Income/Operator	$2,262
Rate of Return On Equity Capital Including Appreciation	1.3%

BUSINESS FACTORS	
Worker equivalent	3.08
Number of cows	89
Number of heifers	76
Acres of hay crops*	142
Acres of corn silage*	70
Total tillable acres	280
Pounds of milk sold	1,373,500
Pounds of milk sold per cow	15,433
Tons hay crop dry matter/acre	2.7
Tons corn silage per acre	14.0
Cows per worker	29
Lbs. of milk sold per worker	445,942
% feed is of milk receipts	24%
Feed & crop expense per cwt. milk	$4.53
Fertilizer & lime/tillable acre	$32
Machinery cost per cow	$433
Average price per cwt. milk	$13.49

*Average of all farms.

Table 55. FARM BUSINESS SUMMARY
Average Per Cow, 458 New York Dairy Farms, 1984

CAPITAL INVESTMENT	1/1/84	1/1/85
Livestock	$1,313	$1,286
Feed & supplies	429	446
Machinery & equipment	1,049	1,057
Land & buildings	2,716	2,731
TOTAL INVESTMENT	$5,507	$5,520

EXPENSES	
Labor	
Hired	$ 215
Feed	
Dairy grain & concentrate	507
Hay & other	27
Machinery	
Machine hire	17
Machinery repair	107
Auto expense	5
Gas & oil	78
Livestock	
Replacement livestock	15
Breeding fees	32
Veterinary & medicine	44
Milk marketing	159
Cattle lease	1
Other livestock expense	84
Crops	
Lime & fertilizer	102
Seeds & plants	34
Spray & other	31
Real Estate	
Land, building, fence repair	28
Taxes	50
Insurance	31
Rent	40
Other	
Telephone (farm share)	7
Electricity (farm share)	50
Interest paid	215
Miscellaneous	27
TOTAL CASH EXPENSES	$1,906
Expansion livestock	19
Machinery depreciation	173
Building depreciation	82
Unpaid labor	18
Interest on farm equity @ 5%	189
TOTAL FARM EXPENSES	$2,387

RECEIPTS	
Milk sales	$2,081
Crop sales	24
Dairy cattle sold	137
Livestock sales	31
Gas tax refund	2
Government payments	36
Custom machine work	4
Miscellaneous	35
TOTAL CASH RECEIPTS	$2,350
Increase in livestock	43
Increase in feed & supplies	27
Appreciation	72
TOTAL FARM RECEIPTS	$2,492
TOTAL FARM RECEIPTS EXCLUDING APPRECIATION	$2,420

FINANCIAL SUMMARY	
Net Cash Farm Income	$444
Labor, Management & Ownership Income Per Farm	$294
Number of Operators	1.31
Labor, Management & Ownership Income Per Operator	$224
Labor & Mgmt. Income Per Farm	33
Labor & Mgmt. Income/Operator	25
Rate of Return on Equity Capital Including Appreciation	1.3%

BUSINESS FACTORS	
Worker equivalent	.035
Number of cows	(89)
Number of heifers	.85
Acres of hay crops*	1.6
Acres of corn silage*	.79
Total tillable acres	3.1
Pounds of milk sold	15,433
Tons hay crop dry matter	4.3
Tons corn silage	12.0
Feed & crop expense	$700
Lime & fertilizer	$102
Machinery cost	$433
Total debt	$2,209
Debt payment	$487

*Average of all farms.